# FIELD OBSERVATIONS OF FLOW PATTERNS GENERATED BY AN ICE KEEL IN STRATIFIED FLOW

by

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1988

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# PREFACE

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This data report was prepared by Arctic Sciences Ltd. of Sidney, B.C., who produced all the data plots contained within and coordinated the production of the report. Arctic Sciences Ltd. was also responsible for the translation of the data into GF-3 format for archival purposes. The credit and responsibility of the field program and the data collected however, remains with the Institute of Ocean Sciences.

This work was supported by the Federal Panel on Energy Research and Development (PERD).

## ABSTRACT

Topham, D.R., H.D. Pite, P. Johnston, D.L. Richards, and J.R. Birch, 1987.
Field Observations of Flow Patterns Generated by an Ice Keel in Stratified Flow.
Can. Data Rep. Hydrogr. Ocean Sci. No. 57:230 p.

This report contains oceanographic data obtained during the Ice Keel '85 Experiment, April-May, 1985. The data were required to better understand the momentum exchange which occurs when an ice keel protrudes into an underlying stratified water mass. Nineteen current records and fifty-one CTD profiles were obtained, as well as detailed acoustic data to help visualize the flow dynamics. Much of the backscatter is thought to be from temperature microstructure due to shear flow, while other scatterers are of biological origin. Plankton tows were conducted to better quantify the biological scatterers.

Key words: Ice keel, stratified flow.

## RÉSUMÉ

Topham, D.R., H.D. Pite, P. Johnston, D.L. Richards, and J.R. Birch, 1987.
Field Observations of Flow Patterns Generated by an Ice Keel in Stratified Flow. Can. Data Rep. Hydrogr. Ocean Sci. No. 57:230 p.

Le présent rapport contient des données oceanographiques recueillies en avril et mai 1985 au cours de l'expérience Ice Keel '85. Ces données étaient nécessaires à une meilleure compréhension de la compensation des quantités de mouvement qui a lieu quand une crête de pression sous glace fait saillie dans la masse aqueuse stratifiée sous-jacente. On a recueilli 19 données sur les courants et 51 profils CTP ainsi que des données acoustiques detaillees afin de representer la dynamique du flux. On croit que la plus grande partie de la rétrodiffusion provient de la microstructure thermique causée par le flux de cesaillement tandis que les autres diffuseurs sont d'origine biologique. On a aussi effectué des traits d'énchantillonnage du plancton afin de mieux quantifier les diffuseurs biologiques.

Mots-clés: crête de pression sous glace, flux stratifié

## 1. INTRODUCTION

The extensive ice cover over the Arctic Ocean plays a dominant role in the transfer of heat and momentum between the atmosphere and the underlying water column. In both these cases the mechanical mixing energy supplied by relative motion between the water and the ice cover is crucial to the transfer rates; Lemke and Manley (1984) for example estimate that during the 1975-76 Arctic Ice Dynamics Joint Experiment (AIDJEX) in the Beaufort Sea, mechanical mixing was responsible for maintaining the mixed layer during summer and accounted for about 30% of the winter deepening during ice growth.

The upper layer of the Arctic ocean is commonly described in terms of a planetary boundary layer model: the work of McPhee and Smith (1976) showed that this was justified in an area of smooth multi-year ice with low to moderate relief. In such cases the momentum exchange is described by means of a drag coefficient defined at a standard reference height above the surface, and a quadratic variation with velocity at the reference height. In areas with significant ice ridging however, the downward protruding ice keels represent large perturbations of the boundary layer. The conventional representation of surface roughness by a roughness parameter requires that there be a large separation in scales between the roughness elements and the outer scale of the boundary layer. In the case of the atmosphere where the outerscale is of the order of 1000 m, surface features such as bushes, fences, low buildings, etc. satisfy this condition. For the Arctic Ocean however, with a typical mixed layer depth of about 30 m, almost any piece of ice remnant at the ice/water interface fails to satisfy the criterion of a wide separation of scales. This is particularly so with first year ridged ice where there has been little opportunity for melting to smooth features.

The combination of relatively steep-sided ice keels and underlying stratified water column takes us out of a conventional boundary layer regime into one of stratified flow over obstacles with the resulting emphasis on wave related phenomena.

There have been at least two attempts in the past to investigate keel flows, both in the Beaufort Sea during the AIDJEX program. These suffered from restrictions on their choice of site, being constrained to the vicinity of the AIDJEX camps and from unpredictability of the ensuing water motion relative to the ice, both regarding speed and direction. With this in mind it was decided to seek an isolated keel in fixed ice with well defined tidal flows such that the desired range of Froude numbers was reproduced on a regular basis. A survey of historical ice data (Marko and Fissel, 1984) suggested that the Barrow Strait area of the Northwest Passage had a high probability of furnishing such conditions.

Two potential sites were examined. CTD profiles and 3 days of current data from each site showed that the flow at one of the sites was too fast and the stratification too weak, resulting in a Froude number range that was too high. Site 1 however, just east of Lowther Island in Barrow Strait, had a more suitable combination of conditions and was selected for the main experiment.

## 2. PHYSICAL SETTING

The site chosen for the Ice Keel '85 Experiment is near Lowther Island in Barrow Strait, approximately 5 km southwest of Lowther Shoal (Figure 1). Geographic coordinates are 75° 27.7' North, 97° 10.8' West.

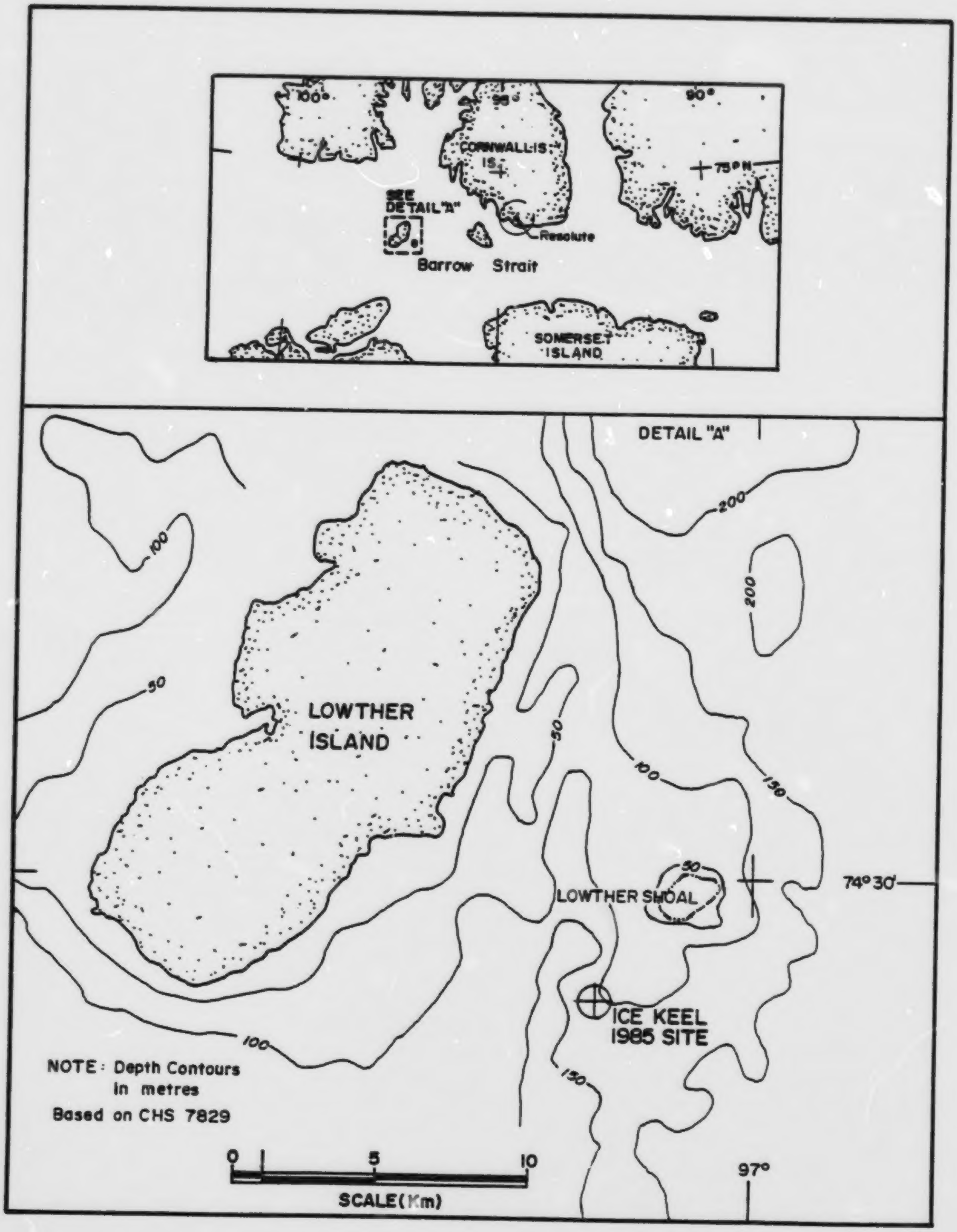
100°
95°
90°
CORNWALLIS IS.
75°N
SEE DETAIL "A"
Resolute
Barrow Strait
SOMERSET ISLAND
DETAIL "A"
200
200
100
50
LOWTHER ISLAND
50
100
150
50
LOWTHER SHOAL
74°30'
ICE KEEL 1985 SITE
100
150
NOTE: Depth Contours in metres
Based on CHS 7829
0
5
10
SCALE(Km)
97°

Figure 1. Site of ice keel 1985 experiment.

## Currents

Barrow Strait has a sill depth of 125 m, separating the deeper channels of Viscount Melville Sound to the West and Lancaster Sound to the east. The bathymetry in the immediate area of the study site is oriented north-south, shoaling to the northeast towards Lowther Shoal. The depth at the study site was 114 m.

## Ice Conditions

The experiment site was located in landfast, immobile ice which had formed and consolidated that year (first-year ice). The under-ice topography was mapped by Offshore Survey and Positioning Services Ltd. of Vancouver using a single beam Mesotech 971 sonar unit operating at 330 kHz with a 1.7° beam angle (Lyall, 1985). The beam is automatically indexed through 360° in the vertical plane, with manual indexing in the horizontal. The acoustic head was mounted 40 m below the ice surface on a rotationally rigid aluminum pole, and from this position an area about 80 m in diameter could be surveyed on both the ice surface and the seabed. Two reflectors at 40 m depth, set to form a 90° angle with the sonar head, provided a reference check at the beginning and end of each vertical sweep. Ten overlapping survey positions were laid out to cover approximately 240 m of keel length. The ten sets of data were combined after removing positioning errors to yield a smoothed data set of contours covering the entire length of keel. The keel survey technique and data processing details are available in the form of a contract report, (Lyall 1985). The desired accuracy was to obtain vertical depths to within 50 cm and horizontal positions to within 1 m.

Figure 2 shows a smoothed contour map of the merged data sets with 1 m contour intervals. Most of the actual keel was covered by at least four overlapping survey positions and the smoothed contours are appropriate for overall hydrodynamic purposes. Visual examination of the keel structure with an underwater TV system revealed a typical first year formation with loosely packed slabs of ice about 50 cm in thickness, typical roughness scales being of the order of 1 m. These large scale elements were in fact resolved by the individual acoustic profiles but are submerged in the subsequent averaging. Figure 3 is a perspective view taken from beneath the ice. It can be seen that the keel is reasonably symmetrical in cross section and of uniform depth along its length. Along the axis of the keel, ice depths were about 8 to 10 m near the instrument line. Away from the ice ridge, the ice was about 1.5 m thick.

## 3. MEASUREMENT STRATEGY

Due to the north-south orientation of the ice keel and the dominant east-west flow patterns, most of the flow is normal to the ice-keel axis. Only this normal component is available to do work against buoyancy forces; the parallel velocity component remains relatively unchanged.

The layout of the instruments was designed to provide data on the upstream and downstream flow conditions. Current meters were used to obtain flow velocities and water density, while CTD profiles produced detailed vertical profiles of water properties. In addition, ten 200 kHz acoustic transducers were mounted just below the ice in a line running normal to the keel axis. The transducers were designed to provide detailed acoustic visualization of the flow patterns, and in addition some plankton data were

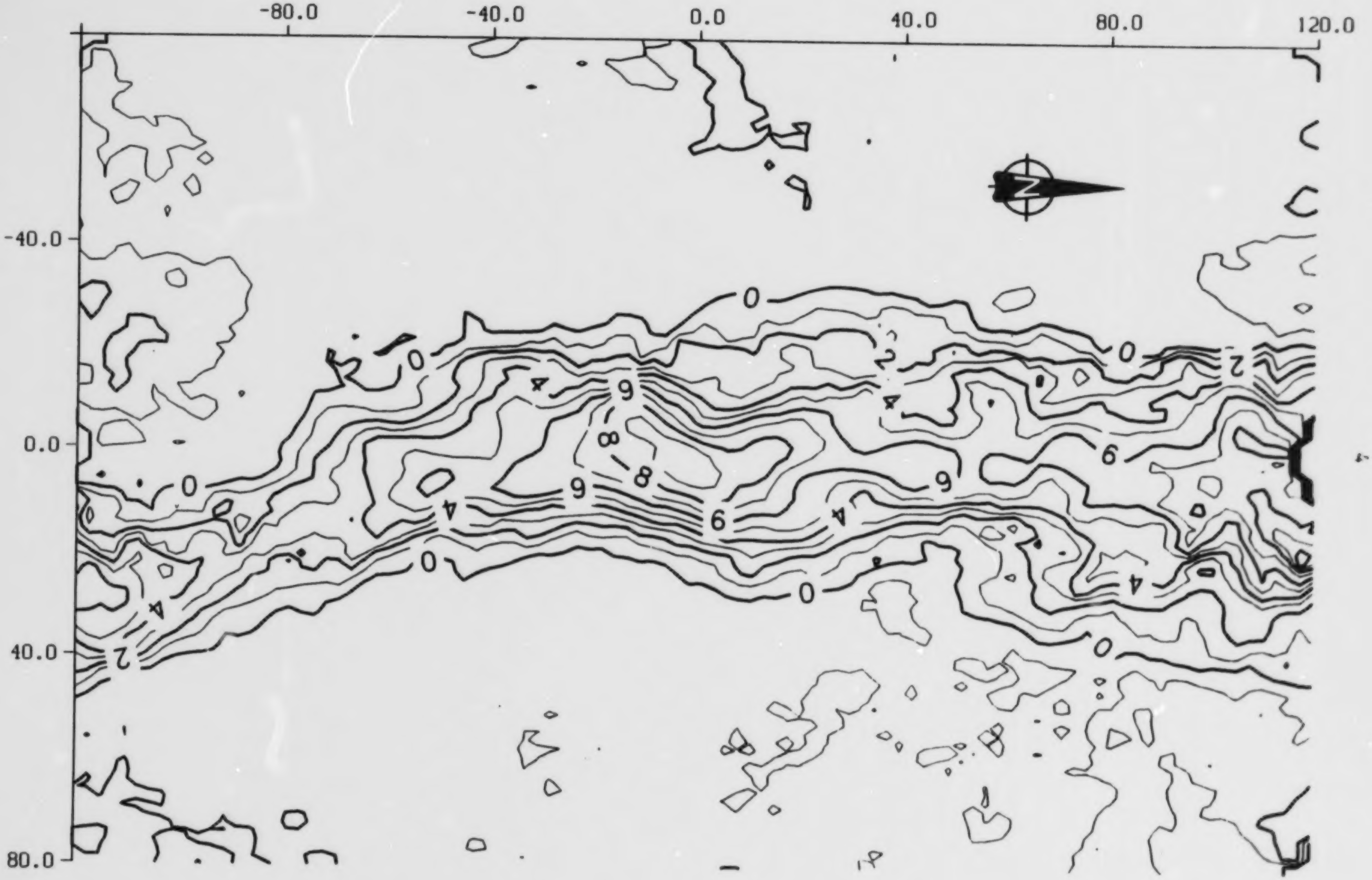
-80.0
-40.0
0.0
40.0
80.0
120.0
-40.0
0.0
40.0
80.0
N
0
2
4
6
8

Figure 2: Ice keel contours;depths shown relative to the mean ice undersurface.

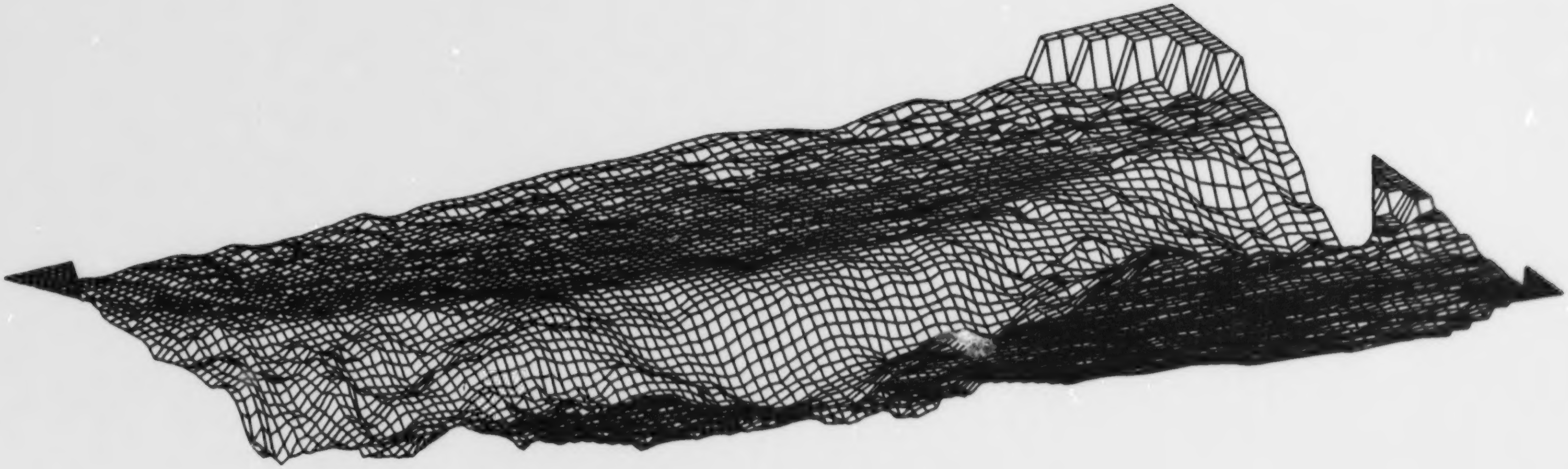

Figure 3. Perspective views of the ice keel, viewed from northeast.

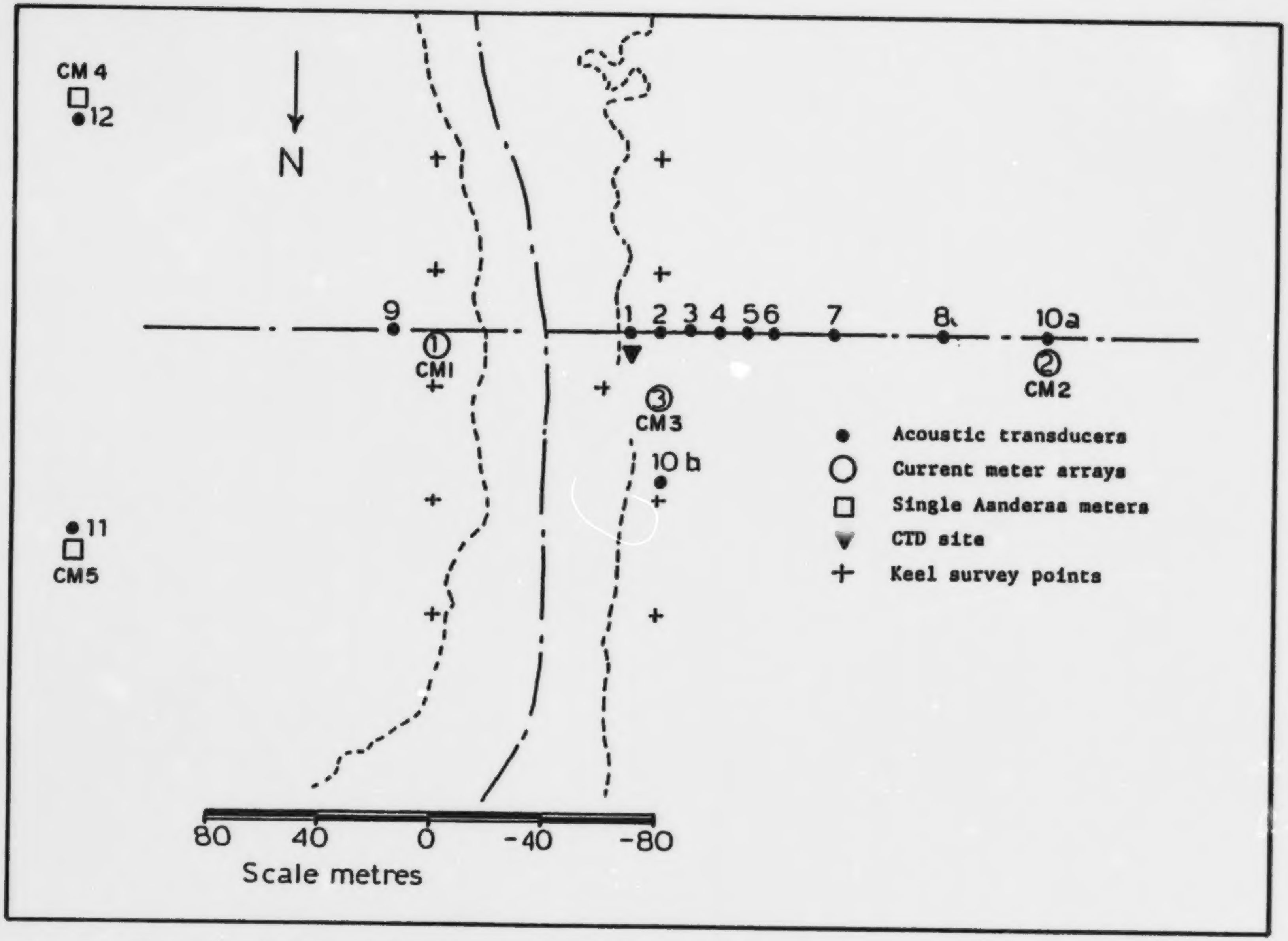
CM 4
12
N
9
1
2
3
4
5
6
7
8
10a
①
CM1
②
CM2
③
CM3
10 b
11
CM5
● Acoustic transducers
○ Current meter arrays
□ Single Aanderaa meters
▼ CTD site
+ Keel survey points
80
40
0
-40
-80
Scale metres

Figure 4. Instrument location sites relative to the ice keel.

collected to aid in the interpretation of the acoustic signals. The layout of the instrumentation relative to the ice keel is presented in Figure 4. The "downstream" side of the keel is to the west. The measurement techniques are described more fully in the following sections (current meter, section 4; CTD, section 5; acoustic, section 6; and plankton, section 7), along with discussion of data processing and presentation.

## 4. CURRENT METER DATA

### 4.1 Current Meter Instrumentation

Current meters were deployed as three arrays in a line perpendicular to the keel axis and singly at 10 m depth in a triangular array (Figure 4). All the measurement locations fell within a circle of about 400 m radius. CM sites 1, 2 and 3 and 10 of the transducer sites were located on the main instrument line which ran from west to east, perpendicular to the axis of the keel. CM1 was immediately east of the keel; CM3 was immediately west, 80 m from CM1 and CM2 was the most westerly, 220 m from CM1. Sites CM4 and CM5 were 138.6 m east of CM1, offset by 85 m to the south and north respectively of the main instrument line.

The three current meter arrays each consisted of 6 meters spaced approximately logarithmically in depth down to 32 m on rotationally rigid pole mountings, recording flow speed and direction together with water temperature and conductivity. These provided vertical profiles immediately upstream and downstream of the keel and farther downstream in the wake region. In addition to these, three single meters moored at 10 m depth on hydraulic hose formed a triangular array about 160 m on a side to provide information on the direction of any significant free running internal waves intersecting the keel. The current meters recorded at 2 minute intervals for up to 12 days, the duration of the actual experiment. The deployment of the current meters is summarized in Table 4-1. No current data were recovered from the instrument at 10 m depth at site CM2.

Table 4.1

Summary of Current meter deployments: Ice Keel '85 Experiment, Spring, 1985. All CM at 75° 27.7 min N; 97° 10.8 min W; Water depth = 114 m; Sample interval = 2 min. Instrument depths are relative to water surface level.

| STN. | INSTR TYPE | SERIAL NO. | INSTR. DEPTH (M) | SENSORS | START | STOP |
|---|---|---|---|---|---|---|
| | | | | | (GMT) 1985 | |
| CM1 | RCM4 | 7919 | 2.60 | S,D,T-HR*,C | 23:14 APR 22 | 03:26 MAY 3 |
| CM1 | RCM4 | 3494 | 4.10 | S,D,T-HR*,C | 23:14 APR 22 | 03:26 MAY 3 |
| CM1 | RCM4 | 6561 | 5.60 | S,D,T-HR*,C | 23:14 APR 22 | 03:26 MAY 3 |
| CM1 | RCM4 | 4400 | 9.60 | S,D,T-HR*,C | 23:14 APR 22 | 03:26 MAY 3 |
| CM1 | RCM4 | 4401 | 17.60 | S,D,T-HR*,C | 23:14 APR 22 | 03:26 MAY 3 |
| CM1 | RCM4 | 4402 | 33.60 | S,D,T-HR*,C | 23:14 APR 22 | 03:26 MAY 3 |
| CM2 | RCM4 | 6527 | 2.60 | S,D,T-HR*,C | 03:04 APR 23 | 00:48 MAY 3 |
| CM2 | RCM4 | 1386 | 4.10 | S,D,T-HR*,C | 03:04 APR 23 | 00:48 MAY 3 |
| CM2 | RCM4 | 5971 | 5.60 | S,D,T-HR*,C | 03:04 APR 23 | 00:48 MAY 3(1) |
| CM2 | RCM4 | CM FLOODED, NO DATA | | | | |
| CM2 | RCM4 | 637 | 17.60 | S,D,T-HR*,C | 03:04 APR 23 | 04:44 MAY 2(2) |
| CM2 | RCM4 | 1936 | 33.60 | S,D,T-HR*,C | 03:04 APR 23 | 00:48 MAY 3 |
| CM3 | VACM | 211 | 2.77 | S,D,T,C | 00:39 APR 27 | 21:29 MAY 2 |
| CM3 | VACM | 121 | 4.27 | S,D,T,C | 00:39 APR 27 | 21:29 MAY 2(3) |
| CM3 | VACM | 122 | 5.77 | S,D,T,C | 00:39 APR 27 | 21:29 MAY 2 |
| CM3 | VACM | 218 | 10.47 | S,D,T,C | 00:39 APR 27 | 21:29 MAY 2 |
| CM3 | VACM | 216 | 17.77 | S,D,T,C | 00:39 APR 27 | 21:29 MAY 2 |
| CM3 | VACM | 217 | 34.47 | S,D,T,C | 00:39 APR 27 | 21:29 MAY 2 |
| CM4 | RCM4 | 1935 | 10.10 | S,D,T-HR*,C | 18:27 APR 27 | 05:33 MAY 3 |
| CM5 | RCM4 | 738 | 10.10 | S,D,T-HR*,C | 17:04 APR 27 | 05:34 MAY 3 |

*High Resolution Temperature Sensor

(1) Direction channel suspect

(2) Speed channel suspect for records 2800-3799.

(3) Salinity channel adjusted for drift.

The current meters were deployed through holes in the ice and rigidly connected to the surface for orientation. Refer to section 4.2 for more detail.

A combination of Aanderaa RCM-4 and Applied Microsystems Ltd. (AML) vector-averaging current meters (VACM) were used. In standard form the RCM-4 units count rotor revolutions for speed determination, and a vane aligns the instrument case in the flow direction. The rotors were redesigned to remove azimuthal variations in speed calibration introduced by the standard rotor supports when the meter was held in a fixed orientation relative to the ice (Pite, 1986). The standard 1-metre long vanes were replaced by smaller 10 cm long vanes which were mounted beneath the pressure case. This allowed the arrays to fit through a 23 cm diameter hole drilled on the ice.

The AML vector-averaging current meters (VACM) use the same rotor and record format as the Aanderaa RCM-4. A small vane 4.5 cm long by 11.4 cm deep is used to determine flow direction. The determination of current flow differs from the RCM-4 in that the VACM computes north and east components of the flow after each rotor revolution. The vectors are summed and averaged over the selected averaging interval, in this case two minutes. The RCM-4 uses the rotor counts over the two minutes to compute an average speed, and the current direction is derived from one instantaneous measurement every two minutes.

Both the RCM-4s and the VACMs were equipped with temperature and conductivity sensors. The RCM-4 sensors were equipped with high resolution circuits.

The manufacturer's specifications for the RCM-4 and VACM are tabulated below.

Table 4.2 Manufacturer's specifications

| Aanderaa RCM-4. | Resolution | Accuracy |
|---|---|---|
| Speed (cm/s) | ±0.25 | ±1.0 |
| Direction (deg) | ±0.35 | ±5.0 |
| Temperature (°C) | | |
| -2.5 to 21.5°C | ±0.02 | ±0.15 |
| -2.1 to 2.9°C | ±0.005 | ±0.01 |
| Salinity | ±0.01 | ±0.02 |
| **AML VACM** | | |
| Speed (cm/s) | ±0.25 | ±2.5 or ±2% |
| Direction (deg) | ±1.4 | ±3.0 |
| Temperature (°C) | ±0.01 | ±0.05 |
| Salinity | ± .06 | ± .1 |

### 4.2 Directional Orientation

Due to the proximity of the north magnetic pole, the horizontal component of the magnetic field is too weak for reliable orientation using a

Rigid moorings, oriented from surface, have become the standard method for current meter mooring near the magnetic pole. This system has been used successfully since the late 1970's by the Canada Centre for Inland Waters (CCIW), the Institute of Ocean Sciences (IOS), and the Defense Research Establishment Pacific (DREP).

The current meters are fixed to a torsionally rigid pole, and lowered to the appropriate depth. A reference line is marked along the length of the pole for alignment in the desired direction. Magnets within the current meter vane couple the vane motion to an internal magnetic follower. With the instrument rigidly coupled to surface, the current flow direction is recorded relative to the current meter case. For the present experiments the current meters were oriented with respect to the line of multiplexed acoustic transducers set normal to the keel axis. The currents are presented as components normal and parallel to the keel, whose geographical orientation was coincidentally directly N-S as determined by sun compass.

### 4.3 Calibration of Current Meter Sensors

#### Rotors

The current meter arrays were in all cases suspended from fixed points in landfast ice and oriented with respect to the axis of the ice keel. The rotor assemblies on the Aanderaa RCM-4s were rebuilt to provide a speed sensitivity independent of current direction relative to the current meter case. This design is also used on the Applied Microsystems vector-averaging current meters. The design technique is described by Pite (1986).

The rotor is a double Savonius design having a 3-part speed calibration as follows:

Modified Aanderaa MK 4s:

If N < OR = 10; Speed = 2.5
If 10 < N < 120; Speed = 1 + 0.152 N
If N > OR = 120; Speed = 3.5 + 0.131 N

AML Vector Averaging:

If N < OR = 16; Speed = 2.5
If 16 < N < 200; Speed = 1 + .0912 N
If N > OR = 200; Speed = 3.5 + .0787 N
Where N is the number recorded by the current meter and speeds are in cm per second.

#### Direction Vanes

The standard Aanderaa direction vane was replaced by a small 10 cm long vane mounted on the end of the current meter case with a magnetic coupling to give direction relative to case, as used in earlier work (Greisman and Lake, 1978). The magnetic follower system was calibrated for each meter on site. A correction table was constructed and recorded values were modified by interpolation.

### Conductivity and Temperature Sensor Calibration

These sensors were calibrated *in situ* by comparison with the CTD profiles. The highly variable nature of the conditions at shallow depth made direct comparison between the current meters and the CTD difficult and the following procedure was adopted. From a preliminary analysis of the speed data and acoustic data, it was known that conditions on the upstream side of the keel were relatively steady and uniform, while those on the downstream side were highly variable and non-uniform. The series of CTD profiles contained periods corresponding to both conditions: however, the resulting temperature-salinity relationship was almost unaffected by the actual flow field.

For array No. 3, positioned close to the CTD, a direct comparison was made between the sensors and the CTD for periods corresponding to upstream conditions. During similar periods the sensors on array No. 2 were calibrated by comparing T-S characteristics with the T-S curve derived from the CTD profiles with the freezing point providing an additional reference condition. Likewise a T-S comparison was made for array No. 1 and the single remote current meters (738 and 1935) during 'upstream' conditions on that side of the keel. The conductivity sensor on VACM No. 121 showed a drift with time and this has been partially compensated for by a linear time dependence applied to the calibration equation.

### 4.4 Current Meter Data Presentation

The calibrated and corrected current-meter data are presented in Appendix 1. The time-series plots of the 2-minute data include the velocity components (normal and parallel to the keel) temperature, and salinity.

The orientation of the two velocity components normal and parallel to the ice keel, is illustrated in Figure 5. The normal component is positive "downstream" or to the west, while the parallel component is positive towards the north.

## 5.0 CTD DATA

Conductivity-temperature-depth (CTD) data were required to determine the stratification and density structure of the flow. Fifty-one CTD profiles were collected, all at the same site, during April 2 - May 1, 1985.

### 5.1 CTD Instrument System

A Guildline 8706 digital CTD probe was used to obtain vertical profiles of temperature, salinity and density. The CTD probe has three sensors: A thermometer, a pressure transducer and a conductivity cell. In addition, a pair of high precision, high stability pressure protected thermistors were fitted to provide *in situ* calibration of the CTD temperature probe. The sample interval was .04 seconds (25 times per second), which at a typical descent rate of 1.5 m/s translated to a vertical sampling resolution of about 6 cm.

The water depth at the ice keel site was 114 m, however, CTD profiles were stopped at 80 m, since perturbations due to the 8 to 10 m deep ice keel did not exceed this depth.

CTD profiles were collected every half hour over specific periods: 28 profiles during 06:18 - 22:20 April 28; 1 profile on April 29; 5 profiles

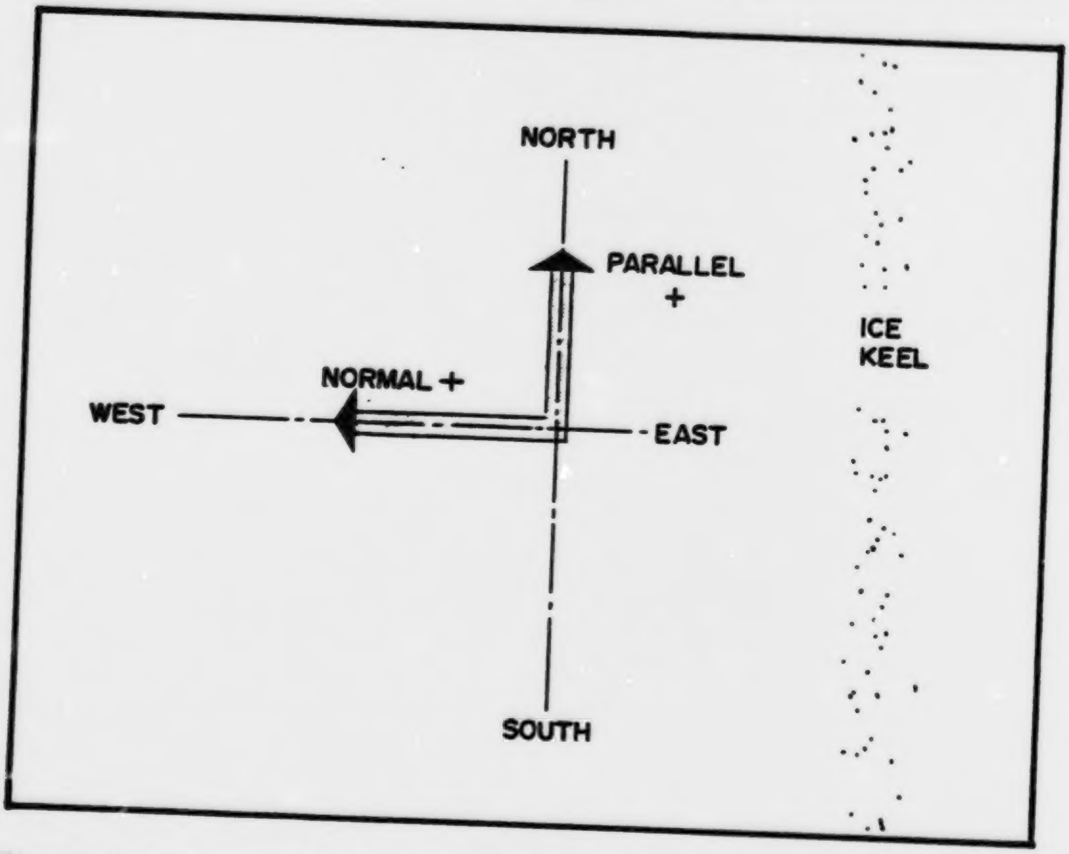
NORTH
PARALLEL +
ICE KEEL
NORMAL +
WEST
EAST
SOUTH

Figure 5. Orientation of the normal and parallel velocity component axes. The directions of positive normal and parallel flows are towards the west and north, respectively. The axis of the ice keel is very close to true north-south.

during 01:14 - 01:56 May 1, and 17 profiles during 14:20 - 19:48 May 1. Table 4-1 summarizes the CTD casts and indicates where water samples were collected for calibration.

The manufacturer's specifications for the Guildline CTD are provided in Table 5.2.

Table 5.1 Summary of CTD profiles

| Exp. No. | Date 1985 | Time GMT | Profile Depth (Metres) | Bottle Depth (Metres) |
|---|---|---|---|---|
| 5631 | Apr. 28 | 06:18 | 78.7 | 25.5 |
| 5632 | Apr. 28 | 06:46 | 78.9 | |
| 5634 | Apr. 28 | 07:20 | 78.6 | |
| 5635 | Apr. 28 | 07:46 | 78.8 | |
| 5636 | Apr. 28 | 08:09 | 78.8 | |
| 5637 | Apr. 28 | 09:08 | 78.8 | |
| 5638 | Apr. 28 | 09:49 | 78.7 | 60.5 |
| 5639 | Apr. 28 | 10:13 | 78.9 | |
| 5640 | Apr. 28 | 10:49 | 79.0 | |
| 5641 | Apr. 28 | 11:18 | 78.9 | |
| 5642 | Apr. 28 | 11:45 | 77.9 | |
| 5643 | Apr. 28 | 12:20 | 78.7 | |
| 5645 | Apr. 28 | 13:15 | 77.1 | |
| 5646 | Apr. 28 | 13:50 | 78.4 | |
| 5647 | Apr. 28 | 14:12 | 78.6 | 51.5 |
| 5648 | Apr. 28 | 14:48 | 79.1 | |
| 5649 | Apr. 28 | 15:23 | 79.1 | |
| 5650 | Apr. 28 | 15:47 | 78.6 | |
| 5651 | Apr. 28 | 16:15 | 78.8 | |
| 5652 | Apr. 28 | 16:40 | 78.7 | |
| 5654 | Apr. 28 | 17:25 | 78.9 | |
| 5655 | Apr. 28 | 17:39 | 79.0 | 49.5 |
| 5656 | Apr. 28 | 18:13 | 79.2 | |
| 5657 | Apr. 28 | 19:02 | 83.1 | |
| 5658 | Apr. 28 | 20:08 | 78.3 | |
| 5659 | Apr. 28 | 20:37 | 78.2 | |
| 5660 | Apr. 28 | 21:07 | 78.4 | |
| 5661 | Apr. 28 | 22:20 | 78.8 | 67.0 |
| 5664 | Apr. 29 | 22:14 | 78.8 | |
| 5666 | May 1 | 01:14 | 80.3 | |
| 5667 | May 1 | 01:29 | 78.3 | |
| 5668 | May 1 | 01:39 | 77.8 | |
| 5669 | May 1 | 01:48 | 78.8 | |
| 5670 | May 1 | 01:56 | 79.5 | |
| 5673 | May 1 | 14:20 | 77.3 | |
| 5674 | May 1 | 15:02 | 78.8 | |
| 5675 | May 1 | 15:19 | 79.0 | |
| 5676 | May 1 | 15:33 | 78.7 | |
| 5677 | May 1 | 15:45 | 79.4 | |
| 5678 | May 1 | 16:01 | 83.0 | |
| 5679 | May 1 | 16:14 | 77.6 | |
| 5680 | May 1 | 16:24 | 78.4 | |
| 5681 | May 1 | 16:49 | 79.7 | 67.7 |
| 5682 | May 1 | 17:01 | 79.5 | |
| 5683 | May 1 | 17:20 | 80.1 | |
| 5684 | May 1 | 17:38 | 78.7 | |
| 5685 | May 1 | 17:49 | 78.5 | |
| 5686 | May 1 | 18:07 | 78.7 | |
| 5687 | May 1 | 18:15 | 78.6 | |
| 5688 | May 1 | 18:43 | 79.1 | |
| 5689 | May 1 | 19:48 | 77.9 | |

**Table 5.2** Specifications for Guildline CTD

| Function | | | | | |
|---|---|---|---|---|---|
| C* | 0.1 to 40 | ±0.005 | ±0.001 | ±0.002/6 mos. | <50ms |
| T | -2°C to 30°C | ±0.005°C | ±0.0005°C | ±0.005°C/6 mos<br>±0.002°C/30 days | <50ms |
| P | to 1500 dbar | ±0.15%F.S | ±0.01%F.S. | | <50ms |

*Specifications for conductivity are given as equivalent salinities.

## 5.2 CTD Calibration

The digital data from the CTD were converted to engineering units using calibration curves determined in the laboratory. Field checks were also made to monitor instrument performance and adjustments.

The pressures from the CTD sensor were checked in the field at a standard depth of 15 m and a mean offset of +1.014 decibars (dbar) was applied to all the values.

The fast response Guildline temperature sensor was calibrated *in situ* by comparison with the high stability thermistors, after appropriate low pass filtering of the signal of the former. A comparison of the two data sets identified a 0.002° offset and this value was subtracted from all CTD temperatures.

Similarly, conductivity ratios determined from the water bottle salinity and CTD temperature were compared to those of the CTD. Based on this a slope correction of 0.99960 was applied to the conductivity ratio data.

## 5.3 CTD Data Processing

After applying the calibration corrections outlined above, the CTD data consisted of temperature and conductivity ratio data as a function of pressure. A further correction was then made to compensate for the descent-rate dependent difference in the response characteristics of the temperature and conductivity sensors. The raw data were adjusted using an algorithm of Perkin and Lewis (1982).

Salinities were computed from the pressure, temperature and conductivity ratio data using the Practical Salinity Scale 1978 (Lewis, 1980). The salinities are given in practical salinity units. [Note: The following corrections should be made to Lewis, 1980. In equation (8), the coefficient $C_3$ should read $-6.9698 \times 10^{-7}$ and in equation (9), the variable corresponding to the coefficient $b_3$ should be $R_T^{3/2}$.]

Surface freezing point temperatures were computed from the expression of Millero (1978) and density from that of Millero and Poisson (1981).

The velocity of sound was computed using the algorithm of Wilson (1960). The CTD data were checked for spikes both automatically by the computer and then manually. The density inversions which occasionally occur are felt to be real, and a consequence of vigorous mixing.

### 5.4 CTD Data Presentation

Listings and profile plots of the CTD data are included in Appendix 2. The listed data have been interpolated to integral depths. The corresponding profile plots of the vertical water structure are on the facing page.

The CTD data are also presented as temperature versus salinity (T-S) plots in Appendix 3. Each 10 decibar increment in depth is indicated with an 'x'.

## 6.0 ACOUSTIC DATA

### 6.1 Acoustic Sounder System

The acoustic instrumentation consisted of twelve 200 kHz transducers mounted vertically through the ice, up to 8 of which could be multiplexed to a Furuno FCV 201 sounder/monitor unit. Their positions are numbered 1 through 12 on Figure 4 and the multiplexed group is shown relative to the keel contours on Figure 2. Stations 10A and 10B mark alternative sites of the same transducer which was re-positioned during the course of the experiment. This multiplexed data was recorded on standard half hour audio magnetic cassette tapes, with the capability for realtime display of two sequential channels in hardcopy form. An acoustic pulse length of 150 microseconds was used throughout and with eight transducers multiplexed, each transducer fired at three second intervals. This repetition rate is fixed by the water depth and the time required for multiple reflections to decay. With the relatively low flow speeds at the experimental site, 10 to 20 cm/sec, this repetition rate is sufficient to resolve the flow features of interest. The remaining 4 transducers were powered by stand alone Furuno 606 sounders. In practice most of the acoustic data was taken with the multiplexed system alone because of mutual interference between separate sounder systems. The half hour audio cassettes were later copied onto VHS video tapes via a Sony digital audio processor PCM 501ES unit to give 6 hour continuous recordings. The original Fuji audio cassettes were recorded alternately on a pair of Sony TCK61 machines to provide approximately one minute of overlap between tapes. On the video copies each separate tape copy is separated by a section of blank tape.

### 6.2 Acoustic Data Presentation and Discussion

It is not practical to present all the acoustic data here. An index of the data tapes is included in Appendix 4.

We have chosen two segments of data for discussion here for which the array of acoustic sounders lies in the lee of the keel. In general the oncoming flow is not normal to the keel center line and experiences drastic direction changes as the keel is traversed. Simple considerations of the kinetic energy of the flow suggests a decomposition into components normal and parallel to the keel axis, only the former being available to work against buoyancy forces. This gives a satisfactory description of the angular deviations of the flow, the normal component being modified as dictated by the corresponding Froude number regime, whilst the parallel component remains relatively unchanged. Flows have been classified on the basis of an equivalent single layer representation of the system with Froude numbers based on the normal component of flow measured at 8m depth far upstream. In the absence of more complete information the upper layer depth has been taken from densities calculated using the temperatures and conductivities obtained from

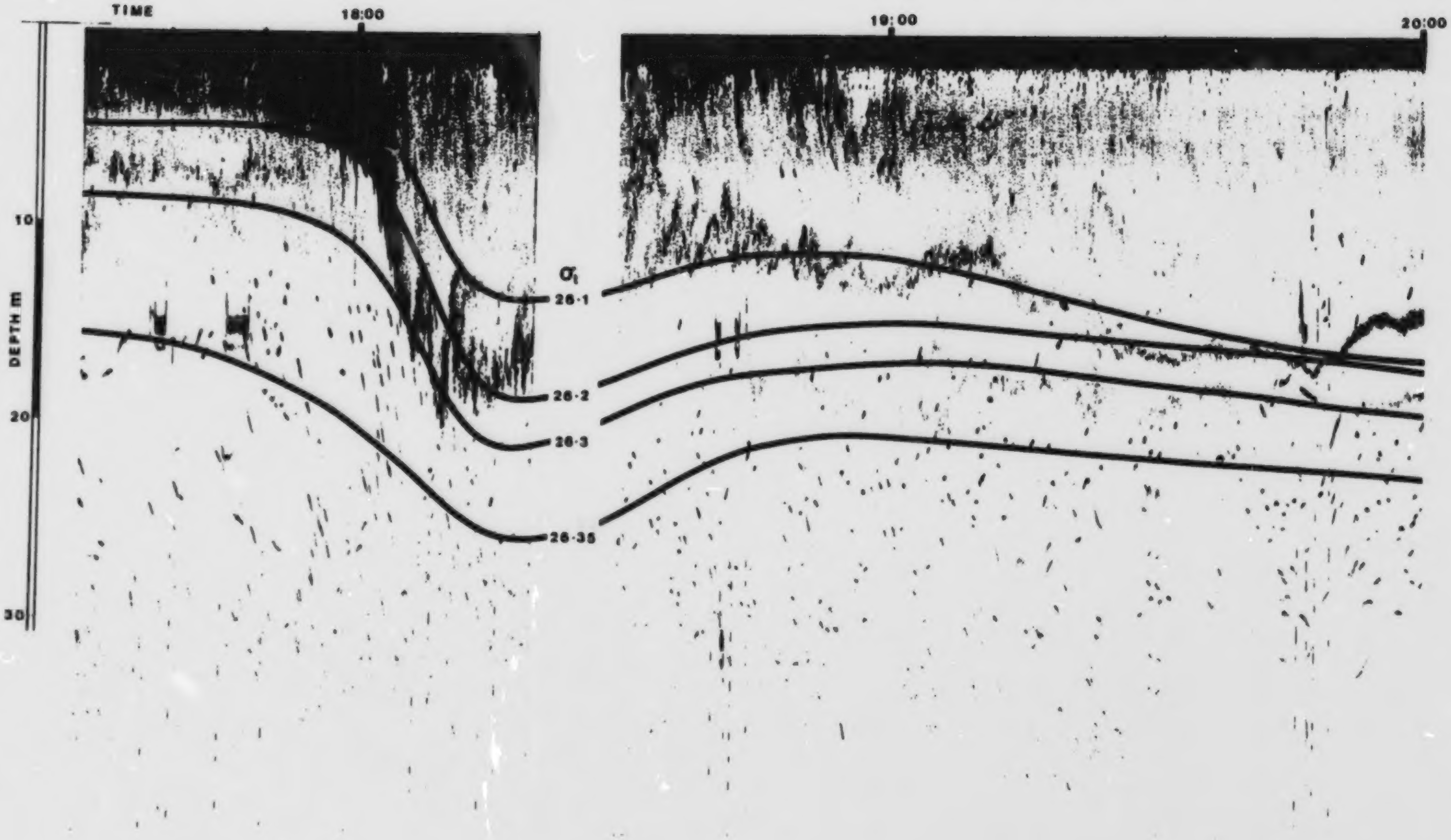

Figure 6: acoustic record from transducer #2 on May 1. Isopycnal lines derived from CTD records.

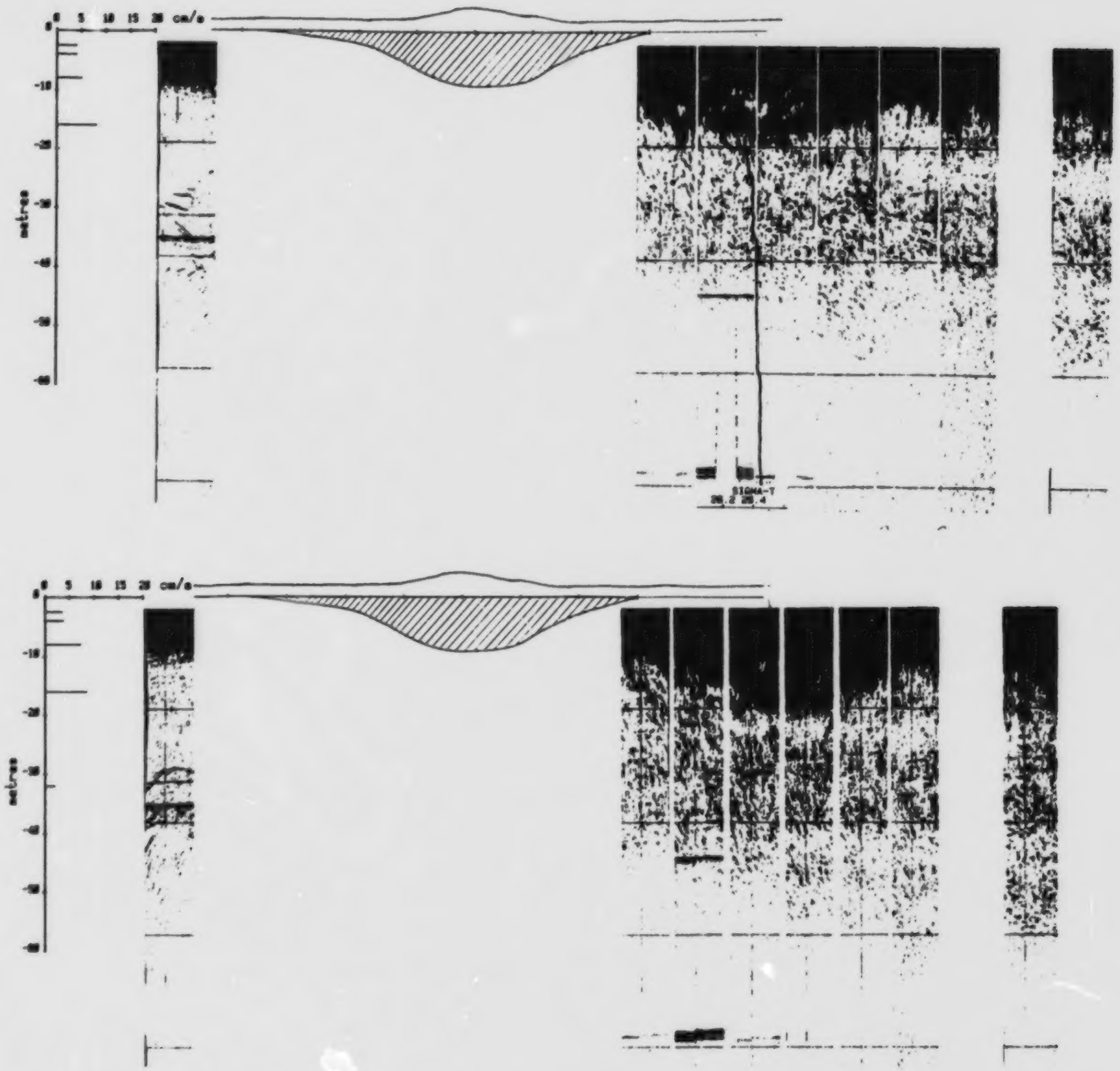

Figure 7:Reconstructed acoustic images from timeseries segments.

the near upstream current meter array. Blockage effects will yield an overestimate of this depth and Froude numbers will be correspondingly low.

Figure 6 shows an acoustic record from transducer no. 2 in the lee during a period of decelerating flow, starting from an upstream Froude number of 0.43 and reducing to 0.20 in about 1 hour. The strong continuous acoustic signal results from the temperature microstructure generated in regions of high shear. For these Froude numbers the flow is expected to be of the crest controlled type with a far downstream lee jump. The depth increase of the reflecting layer shown on the acoustic charts is interpreted as a steep breaking lee wave or internal hydraulic jump passing the sensor position as the upstream flow slows. The interpretation of the acoustic signal in terms of the flow dynamics is confirmed by a comparison with accompanying changes in the density field. The isopycnal lines superimposed on the acoustic record are derived from a series of CTD profiles and clearly show the downward displacement of fluid associated with the passage of the large structure. There is a lateral offset between the positions of the CTD and the acoustic transducer which accounts for the difference in shape between the isopycnals and the strongly reflecting layer. It should be noted that the density at the start of this period is higher in the lee than typical surface values in front of the keel, suggesting either that some upstream blockage or mixing has occurred.

By displaying small sections of records from the multiplexed sounders, a pseudo-spatial picture of the flow can be constructed. Figure 7 shows two such examples, the upper at 16:20, has the upstream interface at 16m and a steady upstream Froude number of 0.5; the lower at 17:40, shortly after the start of a deceleration period, has an interface depth of 12m and a Froude number of 0.4. The normal components of the measured velocity profiles have been superimposed and on the picture at 16:20 clearly demonstrate the strong supercritical lee jet. The accompanying acoustic records show an extended hydraulic jump extending to the subcritical flow shown by the far downstream velocity profile. The velocity field at 17:40, is similar with a slightly reduced lee jet, but the acoustic records show the internal hydraulic jump to have grown to a large amplitude wave like feature.

## 7.0 PLANKTON DATA

The echo sounders record returns from scatterers within the water column. Sound speed microstructure, in regions of high shear flow, is responsible for much of the diffuse backscatter. However, the strong isolated scatterers are of biological origin or suspended matter.

In order to better quantify the scatterers present, a series of vertical plankton tows was obtained using a 505 micron (0.0505 cm) mesh net. This is a relatively large mesh size and will capture only the larger biological scatterers.

Eleven vertical tows were made and are tabulated below. A description of the contents retrieved by each tow is included in Appendix 5. Analyses of the contents were performed by Mr. L. Harris of the Marine Ecology Laboratory at the Bedford Institute of Oceanography.

Table 7.1 Vertical Plankton Tows, April 29, 1985

| Tow # | Max. Depth (m) | Start | Stop | Comments |
|---|---|---|---|---|
| | | (GMT) | | |
| 1 | 115 (bottom) | 16:45 | 16:55 | Hand wound |
| 2 | 75 | 17:33 | 17:39 | Power, 1 m/s |
| 3 | 15 | 17:45 | --- | Power, 1 m/s |
| 4 | 75 | 18:03 | 18:08 | Power, 1 m/s |
| 5 | 15 | 18:13 | 18:16 | Power, 1 m/s |
| 6 | 115 (bottom) | 18:29 | 18:33 | Power, 1 m/s |
| 7 | 75 | 19:50 | 19:52 | Power, 0.5 m/s |
| 8 | 35 | --- | 20:05 | Power, 0.5 m/s |
| 9 | 75 | 20:15 | --- | Power, 0.5 m/s |
| 10 | 15 | 20:22 | 20:26 | Power, 0.5 m/s |
| 11 | 50 | 20:27 | --- | High speed |

## 8.0 DATA ARCHIVAL IN GF3-FORMAT

The current meter and CTD data have been archived on two 9-track, ASCII-coded computer tapes in the GF-3 format. GF-3 is the standard format used for the international exchange of oceanographic data (UNESCO, 1980). Copies of these tapes may be obtained from:

Marine Environmental Data Services Branch
Dept. of Fisheries and Oceans
200 Kent Street, 12th Floor
Ottawa, Ontario
Canada, K1A 0E6

The data are contained on two tapes:

| Tape No. | Contents |
|---|---|
| ASLGF3147001 | CTD profiles; exp. no. 5631 through 5689 |
| ASLGF3147002 | Current meter data; 19 records |

Preceeding the data on the GF-3 tapes is documentation, largely extracted verbatim from this data report. The data in ASCII code, are arranged as multiple files; each CTD profile or current meter record makes up one file. Quality control flags are included with the current data as some of the values are suspect. This is not the case with the CTD data.

## 9.0 CHRONOLOGICAL INDEX OF EXPERIMENT NUMBERS

| EXPT. NO. | DATE | DESCRIPTION | |
|---|---|---|---|
| 5600 | April 12 | CTD initial exploration Site 1 (Lowther Is.) | |
| 5601 | April 12 | CTD initial exploration Site 2 (Griffith Island) | |
| 5602 | April 12 | Modified RCM-4 S/N 1936, 10m depth, Site 1. | |
| 5603 | April 12 | Modified RCM-4 S/N 5971, 10m depth, Site 2. | |
| 5604 | April 19 | RCM-4 S/N 3388, 10m, Site 1. | |
| 5605 | April 24 | All night run, Furuno 606 sounders, Site 1. | |
| 5606 | April 25 | Multiplexed sounders, Series 0. Site 1. | |
| 5607 | April 26 | Overnight run transducer No. 1 on EDO chart, Site 1. | |
| 5608 | April 26 | RCM-4 S/N 4402 | Array No. 1 |
| 5609 | April 26 | RCM-4 S/N 4401 | |
| 5610 | April 26 | RCM-4 S/N 4400 | |
| 5611 | April 26 | RCM-4 S/N 6561 | |
| 5612 | April 26 | RCM-4 S/N 3494 | |
| 5613 | April 26 | RCM-4 S/N 7919 | |
| 5614 | April 26 | RCM-4 S/N 1936 | Array No. 2 |
| 5615 | April 26 | RCM-4 S/N 637 | |
| 5616 | April 26 | RCM-4 S/N 2470 | |
| 5617 | April 26 | RCM-4 S/N 5971 | |
| 5618 | April 26 | RCM-4 S/N 1386 | |
| 5619 | April 26 | RCM-4 S/N 6527 | |
| 5620 | April 26 | VACM S/N 217 | Array No. 3 |
| 5621 | April 26 | VACM S/N 216 | |
| 5622 | April 26 | VACM S/N 218 | |
| 5623 | April 26 | VACM S/N 122 | |
| 5624 | April 26 | VACM S/N 121 | |
| 5625 | April 26 | VACM S/N 211 | |
| 5626 | April 27 | Furuno 606 Sounder No. 1 | Series 1 |
| 5627 | April 27 | Furuno 606 Sounder No. 3 | |
| 5628 | April 27 | Multiplexed sounder | |
| 5629 | April 28 | | CTD profiles at 1/2 hour intervals |
| 5630 | April 28 | | |
| 5631 | April 28 | | |
| 5632 | April 28 | | |
| 5633 | April 28 | | |
| 5634 | April 28 | | |
| 5635 | April 28 | | |
| 5636 | April 28 | | |
| 5637 | April 28 | | |
| 5638 | April 28 | | |
| 5639 | April 28 | | |
| 5640 | April 28 | | |
| 5641 | April 28 | | |
| 5642 | April 28 | | |
| 5643 | April 28 | | |
| 5644 | April 28 | | |
| 5645 | April 28 | | |
| 5646 | April 28 | | |
| 5647 | April 28 | | |
| 5648 | April 28 | | |
| 5649 | April 28 | | |
| 5650 | April 28 | | |
| 5651 | April 28 | | |
| 5652 | April 28 | | |
| 5653 | April 28 | | |
| 5654 | April 28 | | |

| EXPT. NO. | DATE | DESCRIPTION |
|---|---|---|
| 5655 | April 28 | CTD profiles at 1/2 hour intervals. |
| 5656 | April 28 | |
| 5657 | April 28 | |
| 5658 | April 28 | |
| 5659 | April 28 | |
| 5660 | April 28 | |
| 5661 | April 28 | |
| 5662 | April 29 | multiplexed sounder series 2 |
| 5663 | April 29 | multiplexed sounder series 3, abandaoned due to noise |
| 5664 | April 29 | CTD |
| 5665 | April 30 | multiplexed sounder series 4 |
| 5666 | May 1 | CTD |
| 5667 | May 1 | |
| 5668 | May 1 | |
| 5669 | May 1 | |
| 5670 | May 1 | |
| 5671 | May 1 | multiplexed sounder, Transducer 1, series 5 |
| 5672 | May 1 | multiplexed sounder, series 6 |
| 5673 | May 1 | CTD at 1/2 hour intervals. |
| 5674 | May 1 | |
| 5675 | May 1 | |
| 5676 | May 1 | |
| 5677 | May 1 | |
| 5678 | May 1 | |
| 5679 | May 1 | |
| 5680 | May 1 | |
| 5681 | May 1 | |
| 5682 | May 1 | |
| 5683 | May 1 | |
| 5684 | May 1 | |
| 5685 | May 1 | |
| 5686 | May 1 | |
| 5687 | May 1 | |
| 5688 | May 1 | |
| 5689 | May 1 | |
| 5690 | May 1 | multiplex sounder, series 7. |

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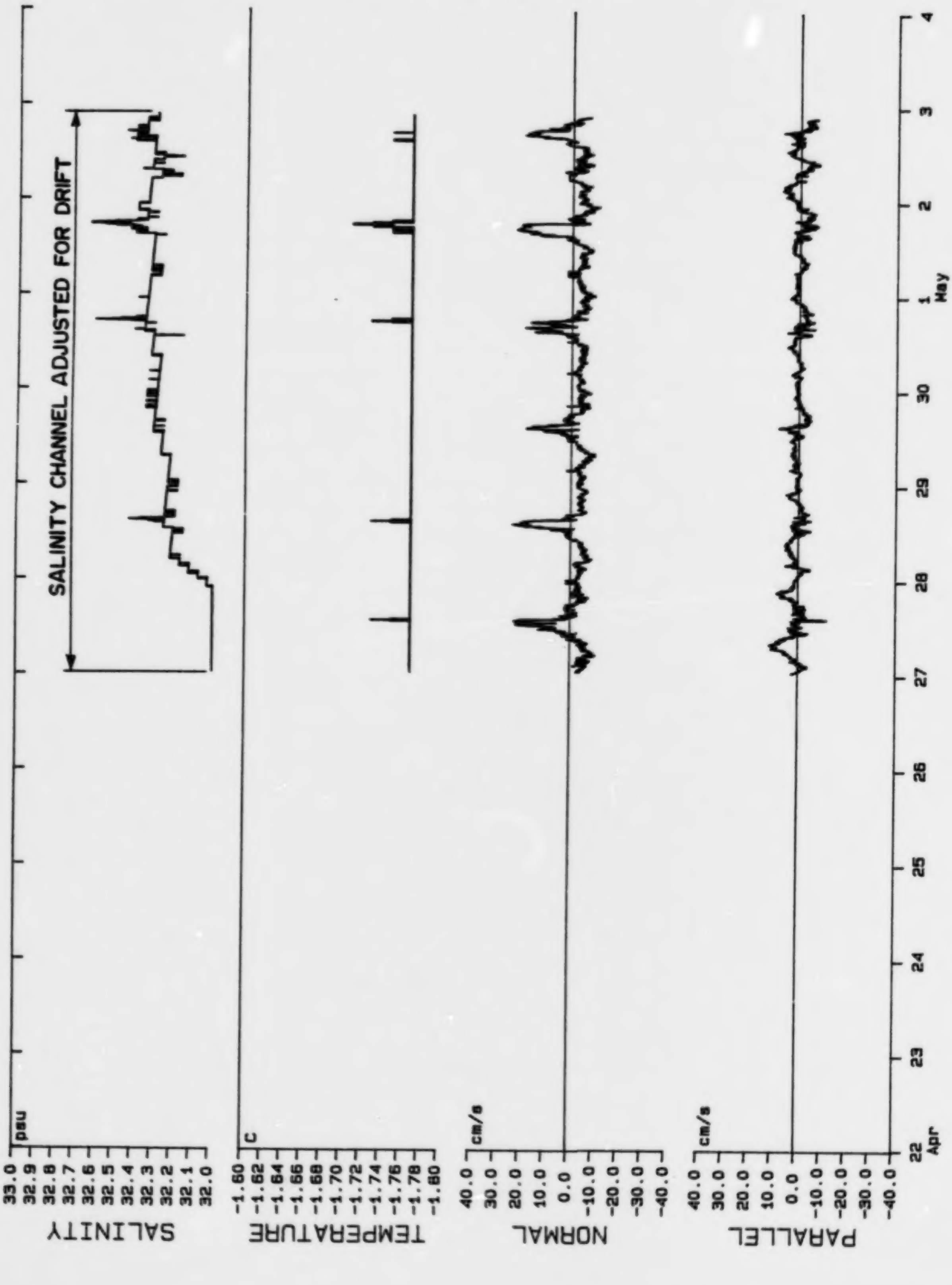
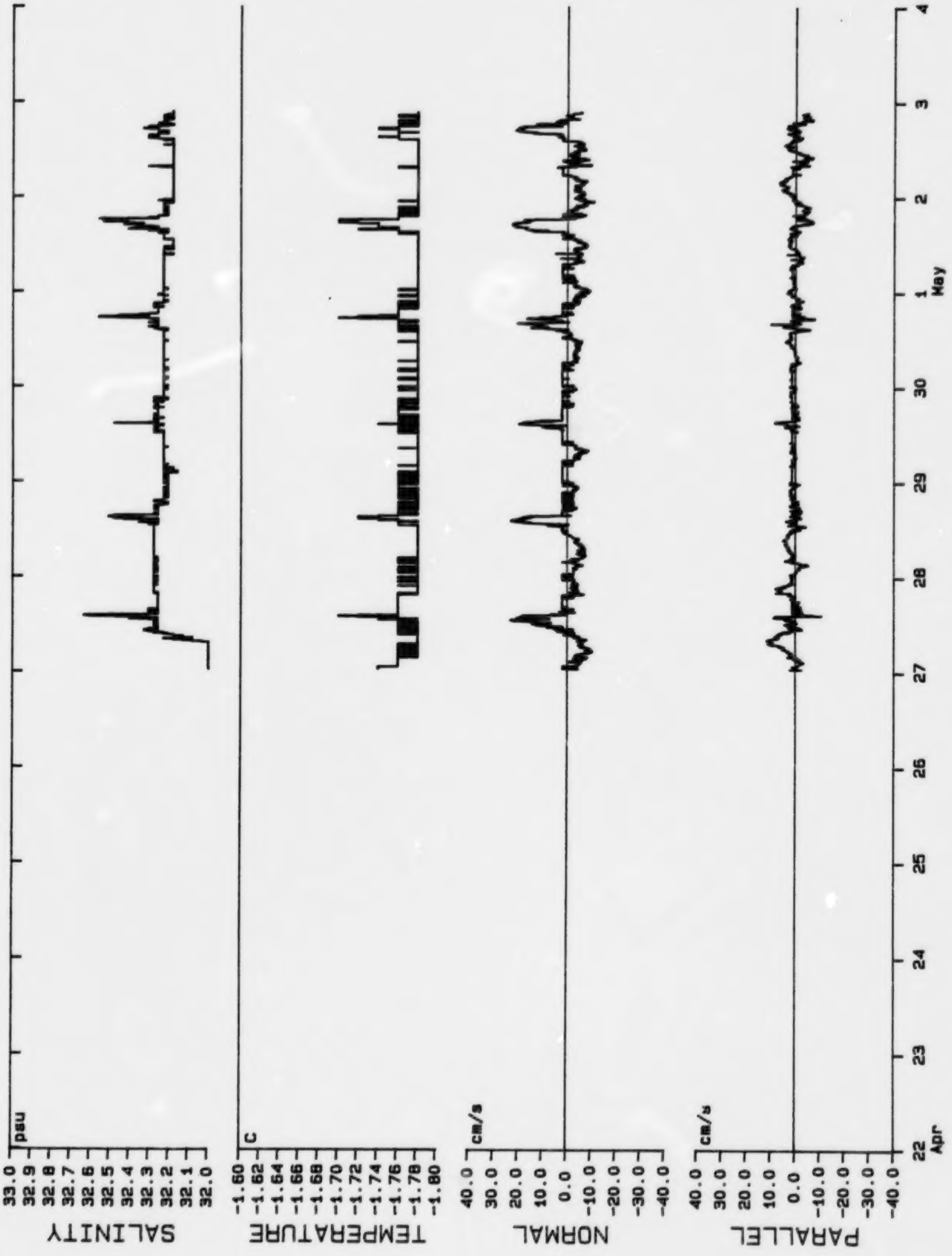
# Appendix 1

## Current meter data time series plots

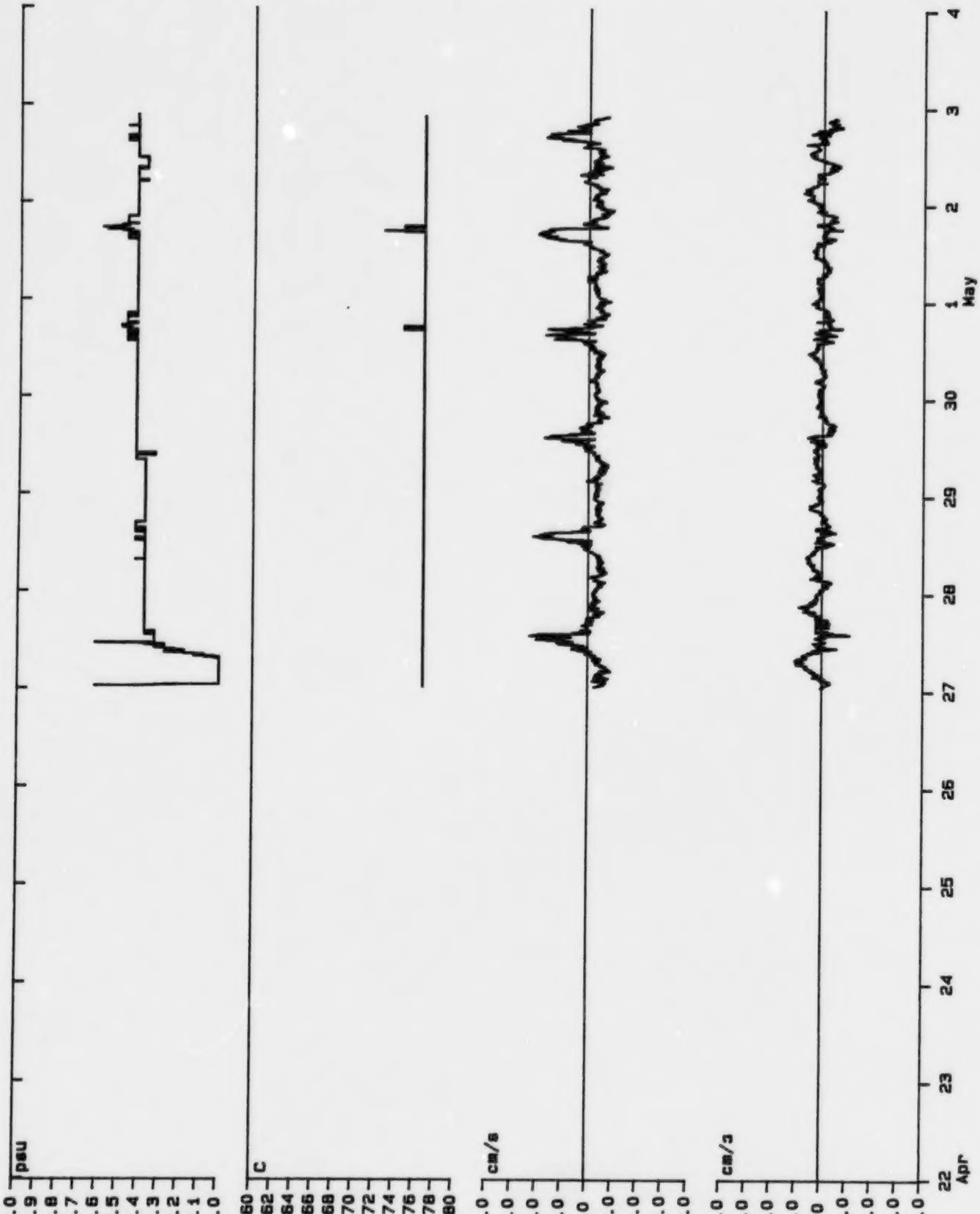
# CURRENT METER S/N 121
Instrument depth: 4.27 m



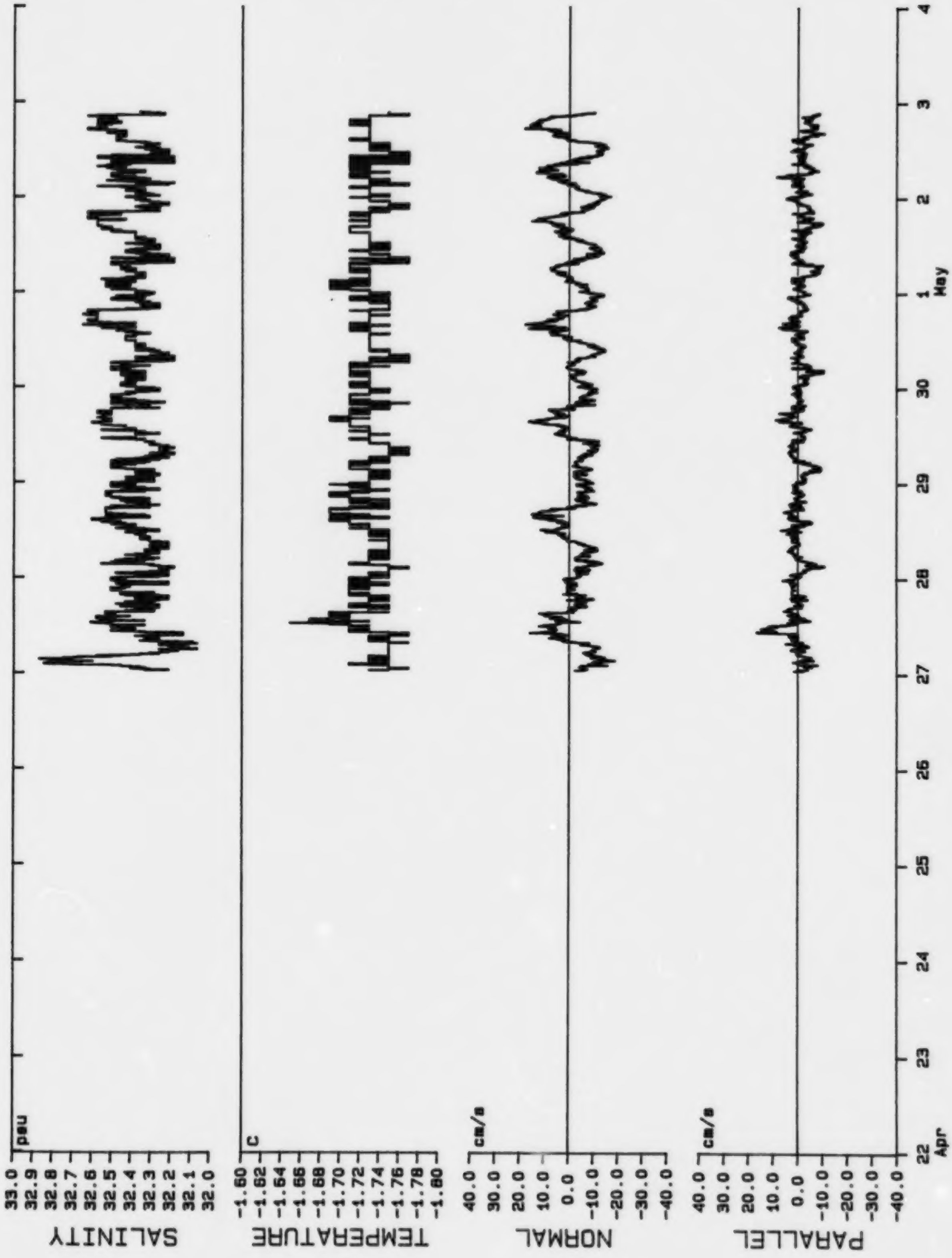
# CURRENT METER S/N 122
## Instrument depth: 5.77 m



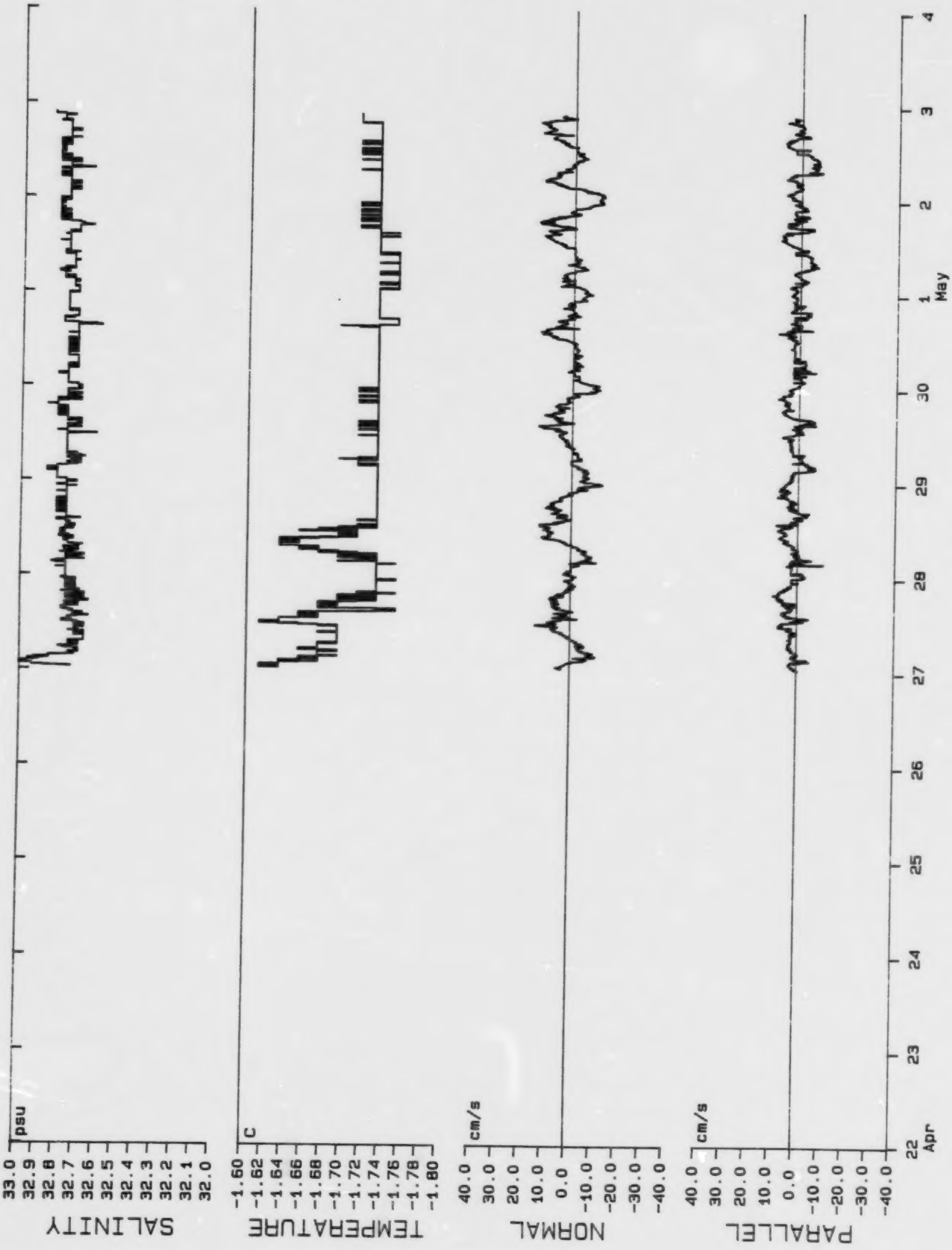
# CURRENT METER S/N 211
Instrument depth: 2.77 m



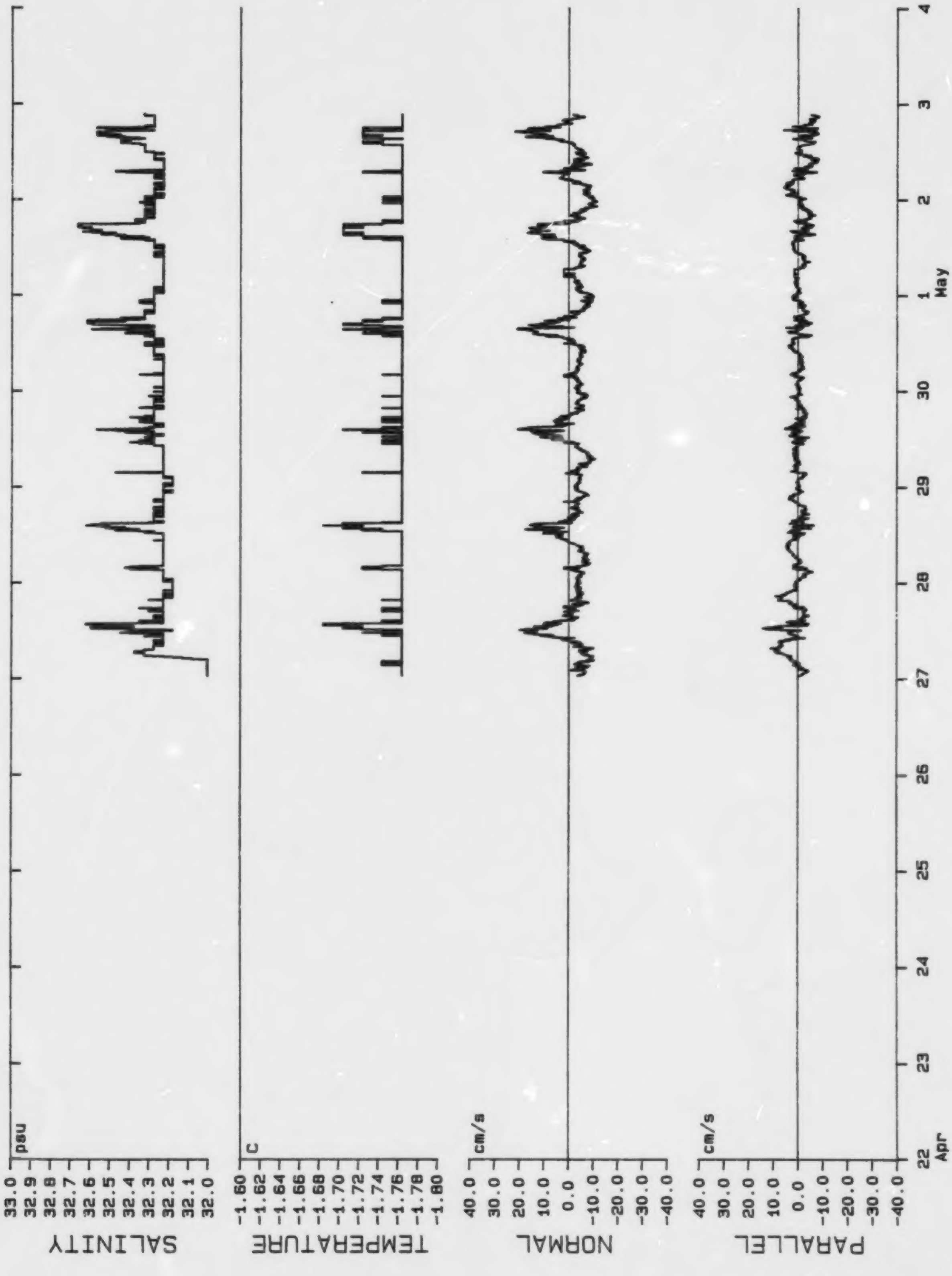
# CURRENT METER S/N 216
Instrument depth: 17.77 m



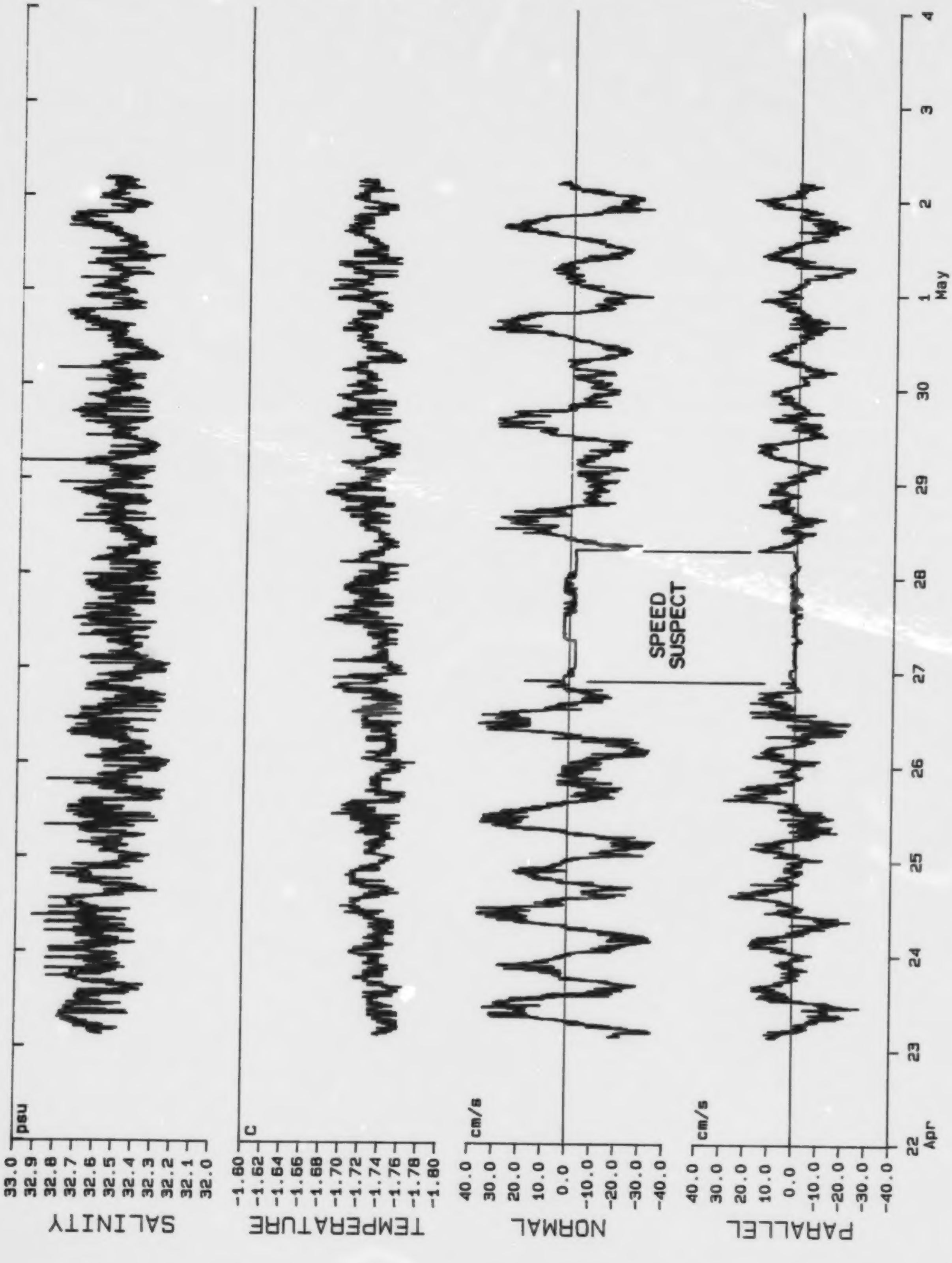
CURRENT METER S/N 217
Instrument depth: 34.77 m



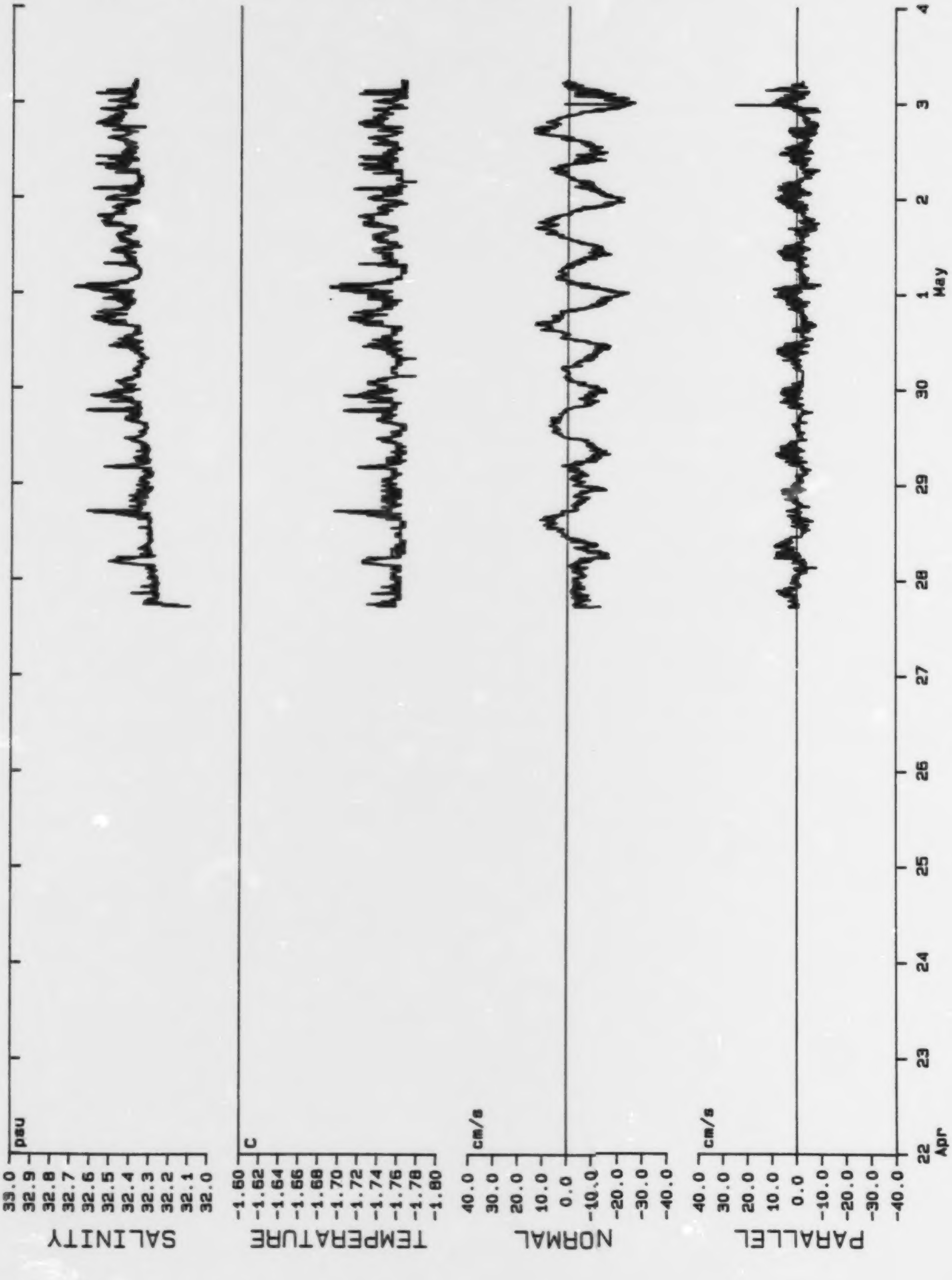
# CURRENT METER S/N 218
Instrument depth: 10.47 m



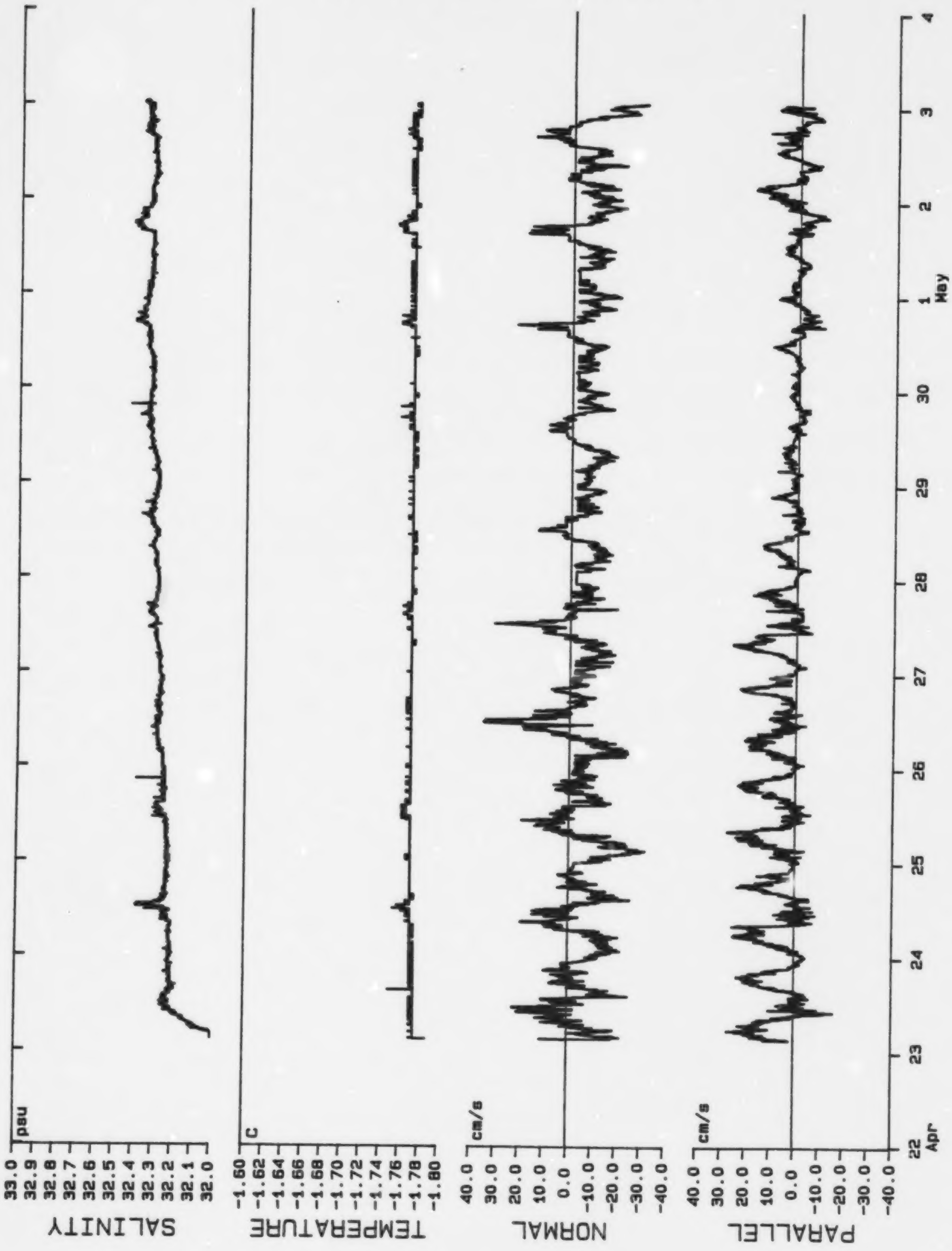
# CURRENT METER S/N 637
# Instrument depth: 17.60 m



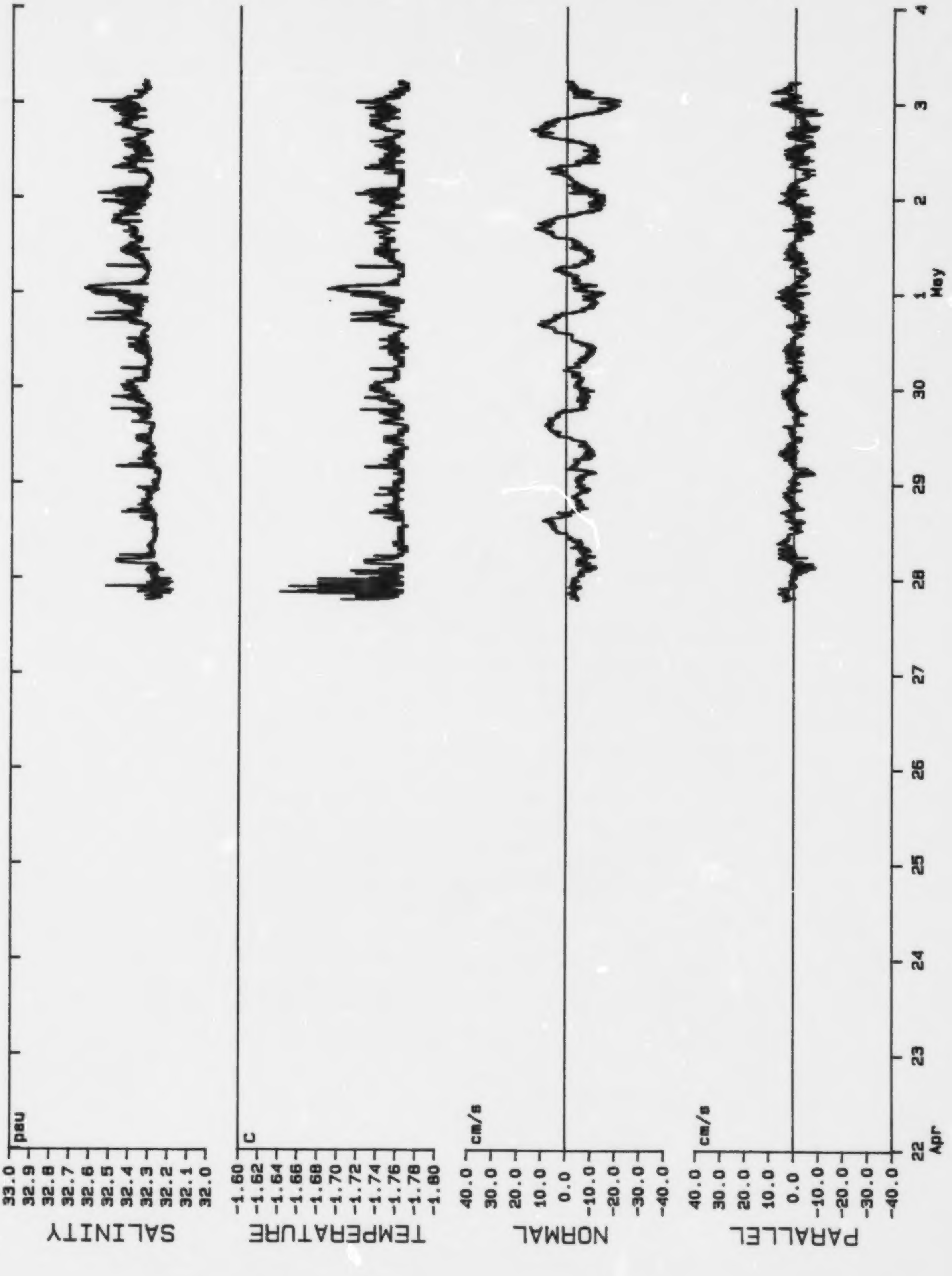
CURRENT METER S/N 738
Instrument depth: 10.10 m



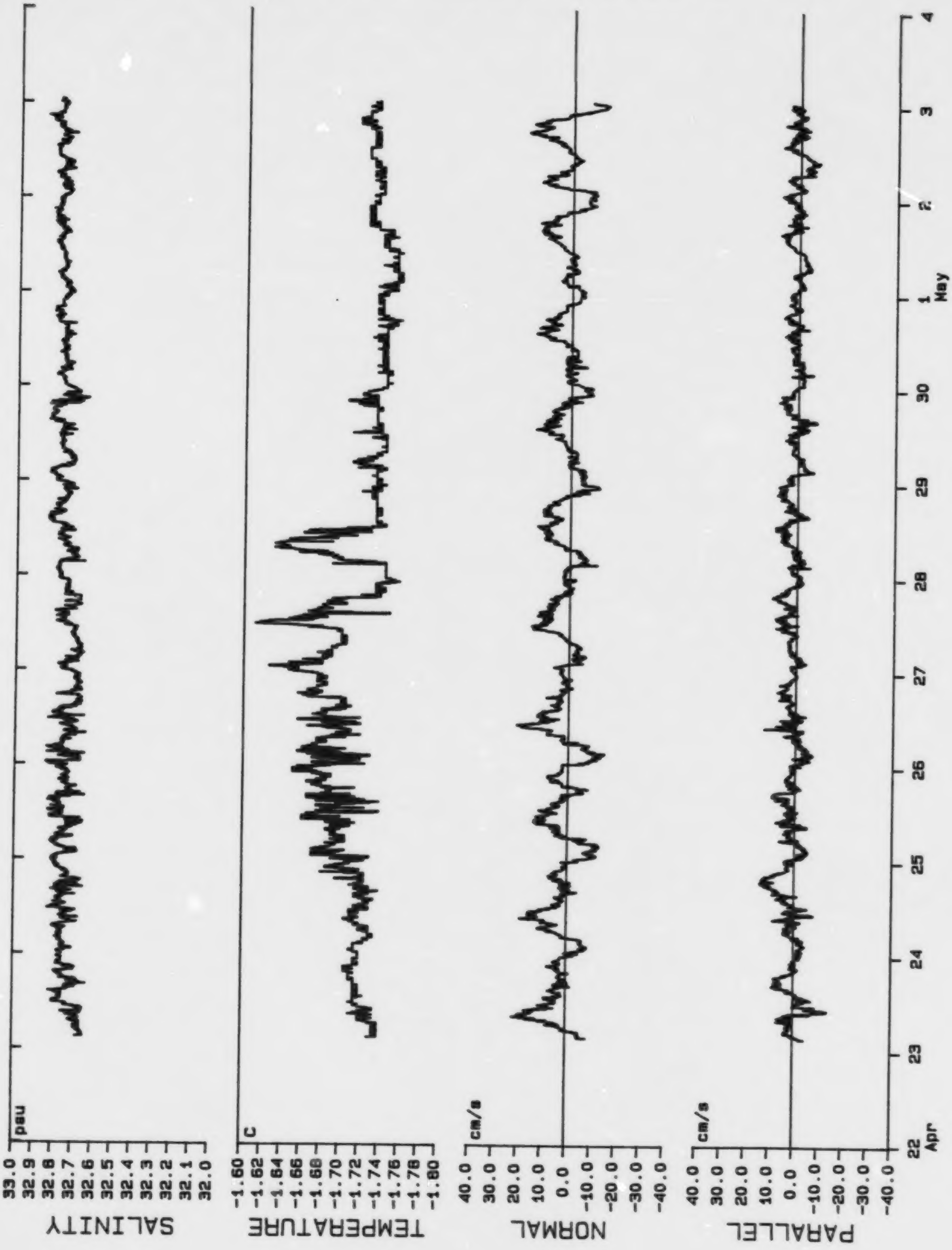
# CURRENT METER S/N 1386
Instrument depth: 4.10 m



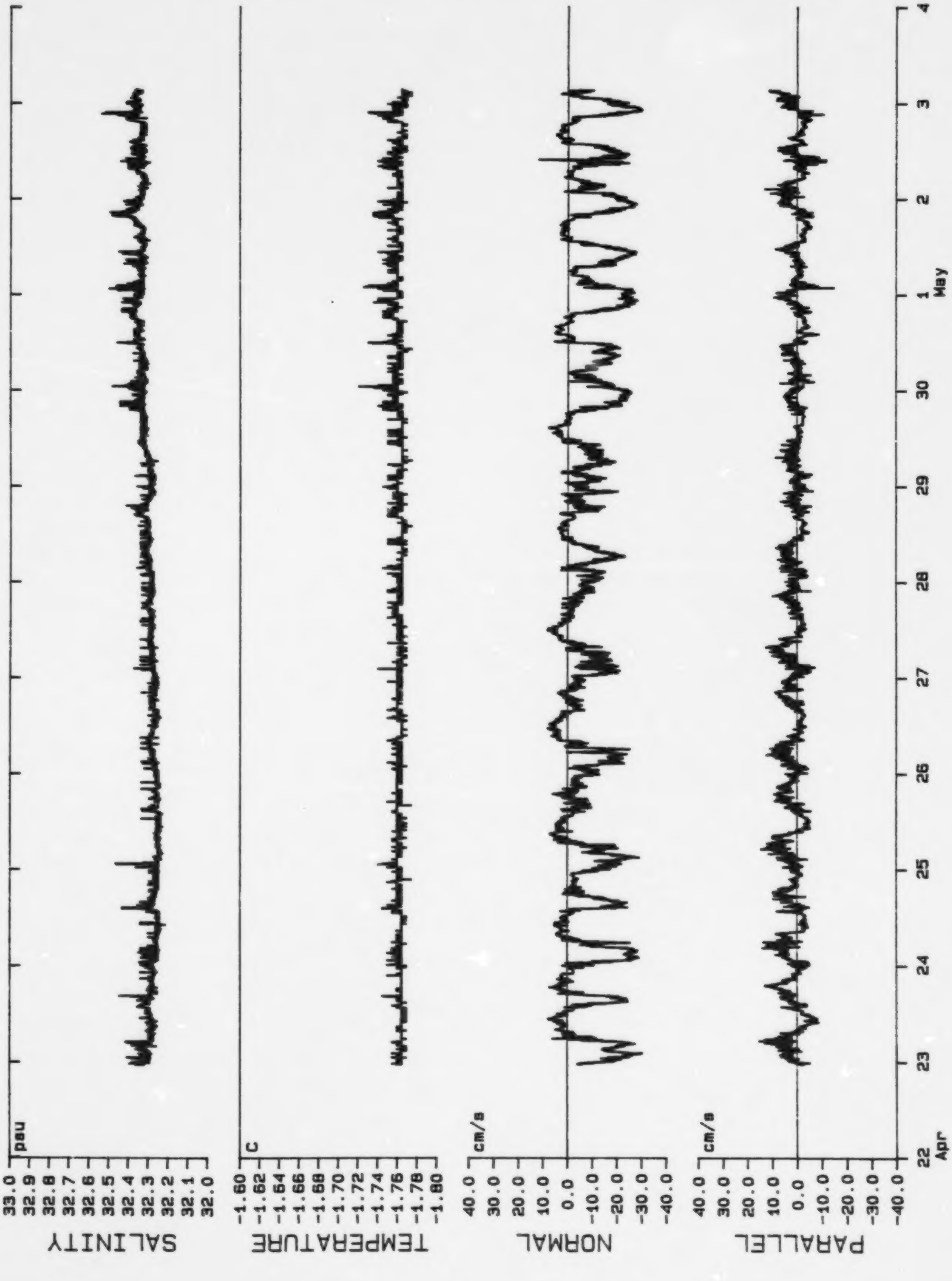
# CURRENT METER S/N 1935
Instrument depth: 10.10 m



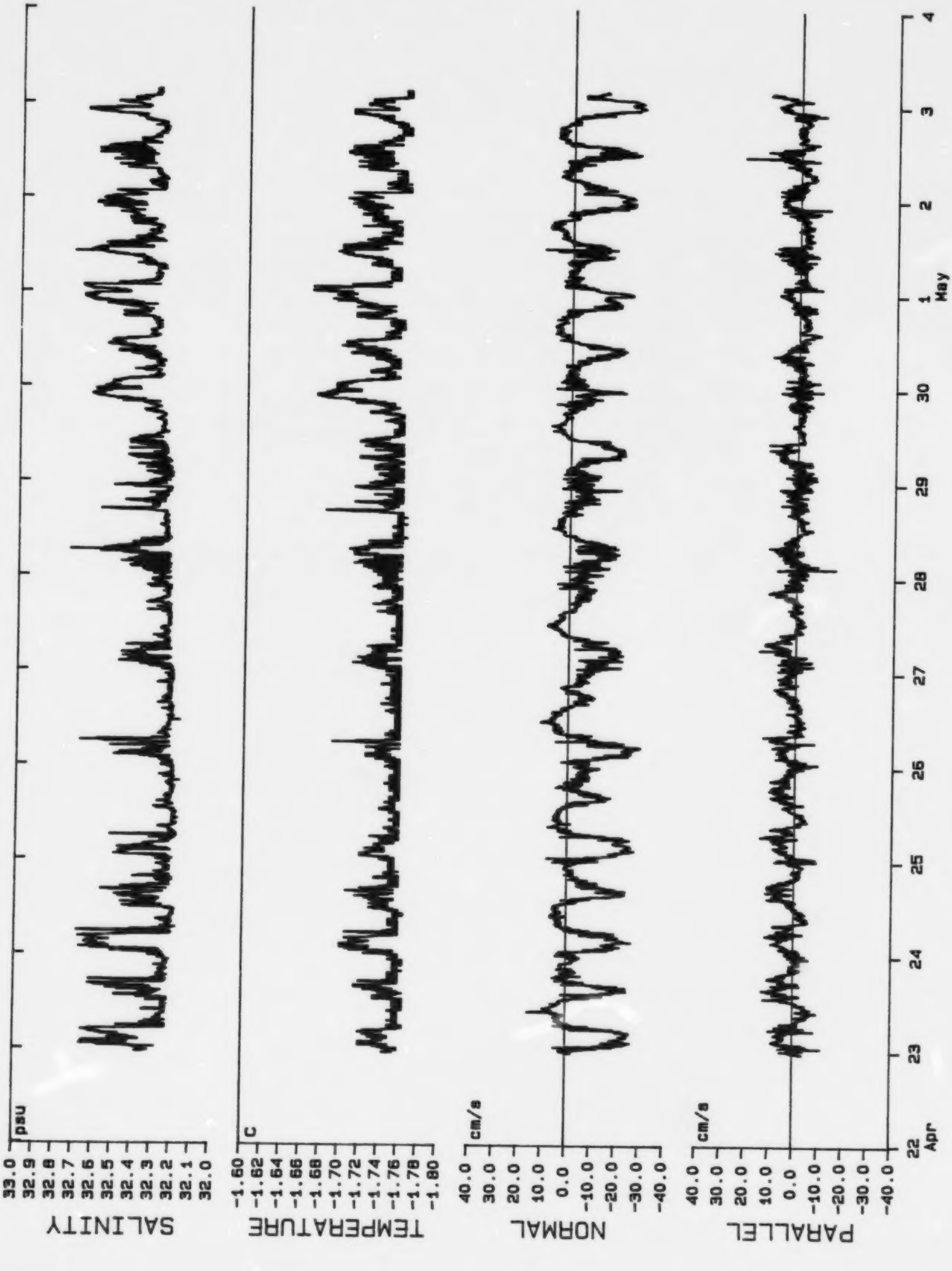
# CURRENT METER S/N 1936
Instrument depth: 33.60 m



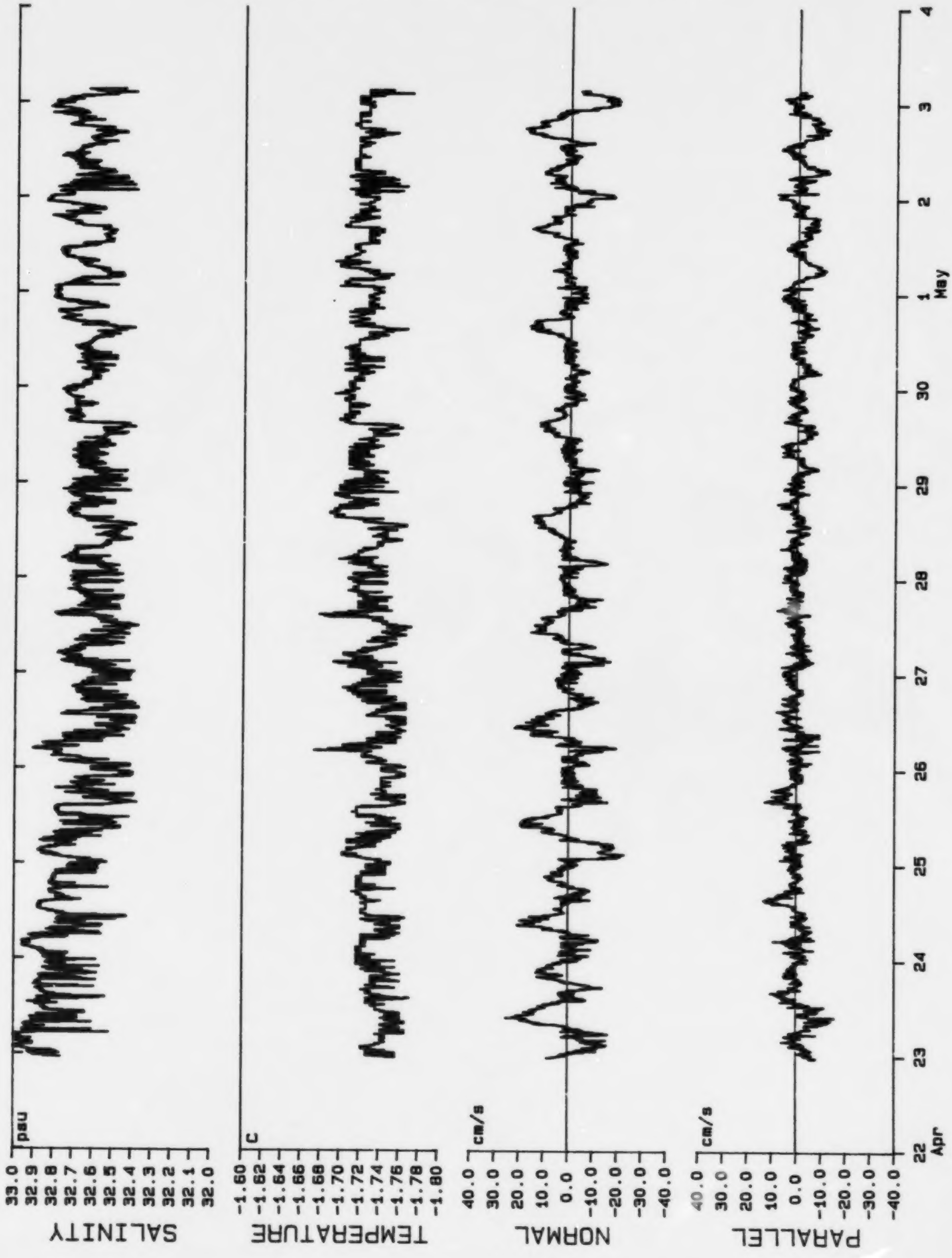
# CURRENT METER S/N 3494
Instrument depth: 4.10 m



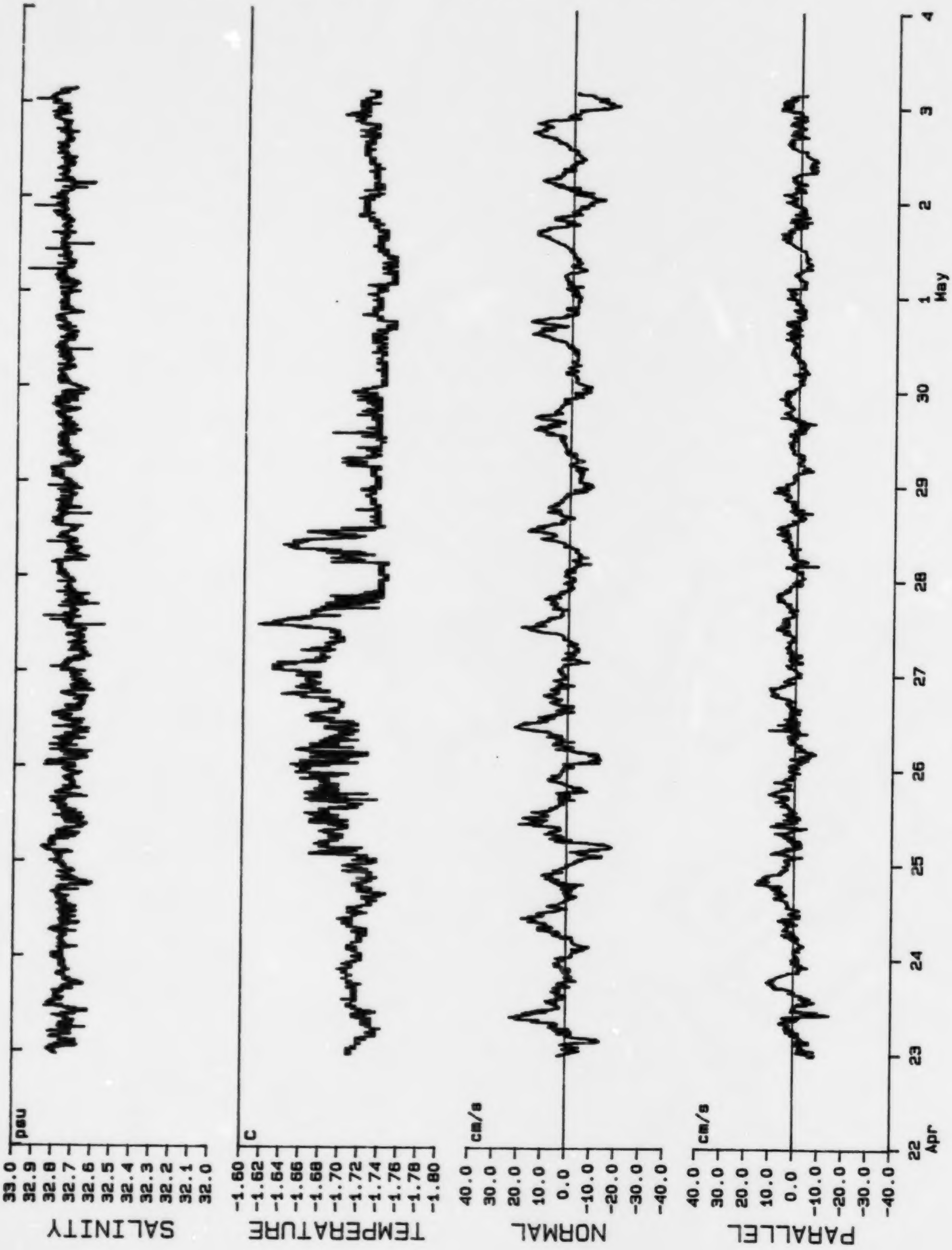
# CURRENT METER S/N 4400
Instrument depth: 9.60 m



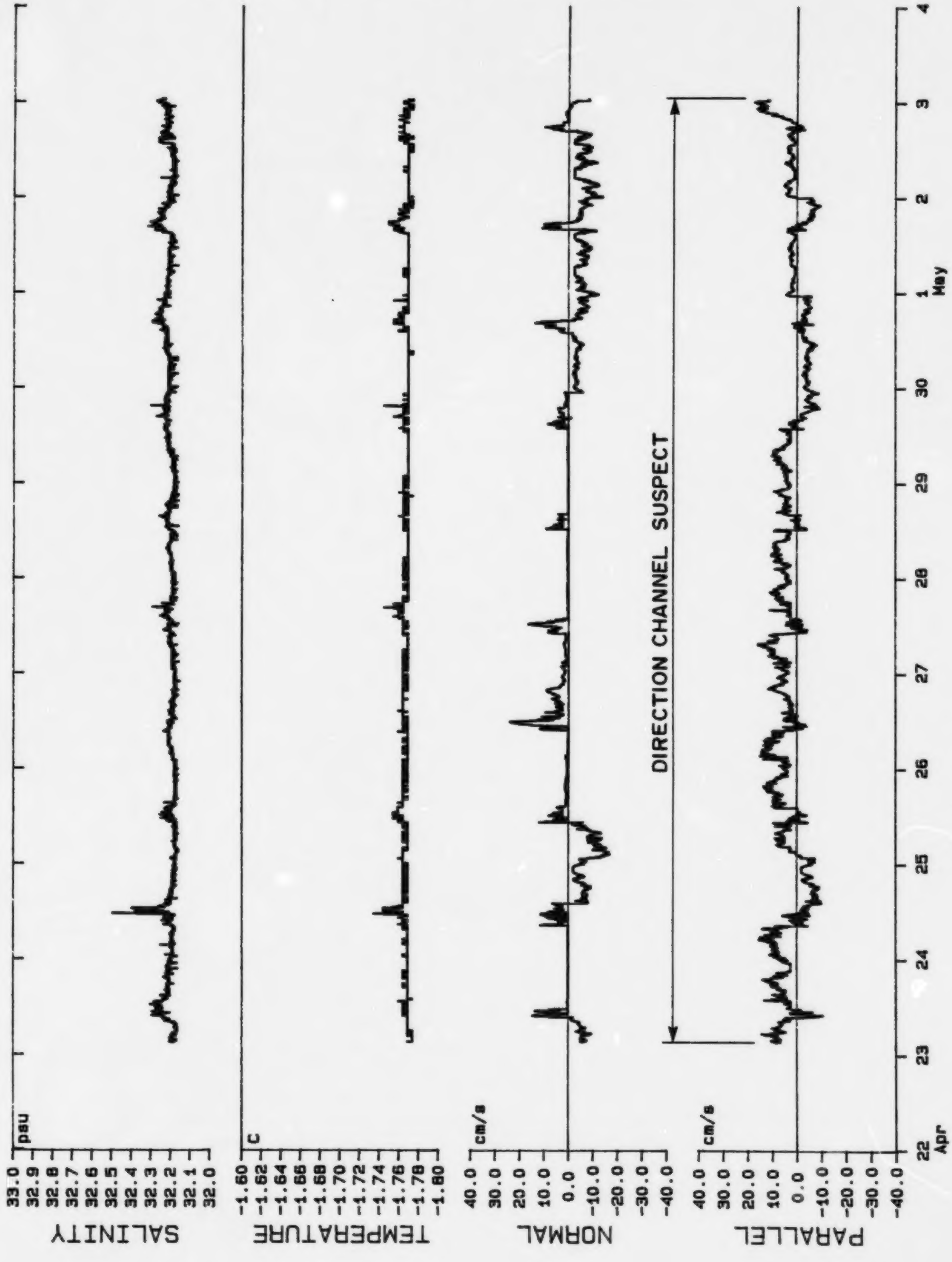
# CURRENT METER S/N 4401
Instrument depth: 17.60 m



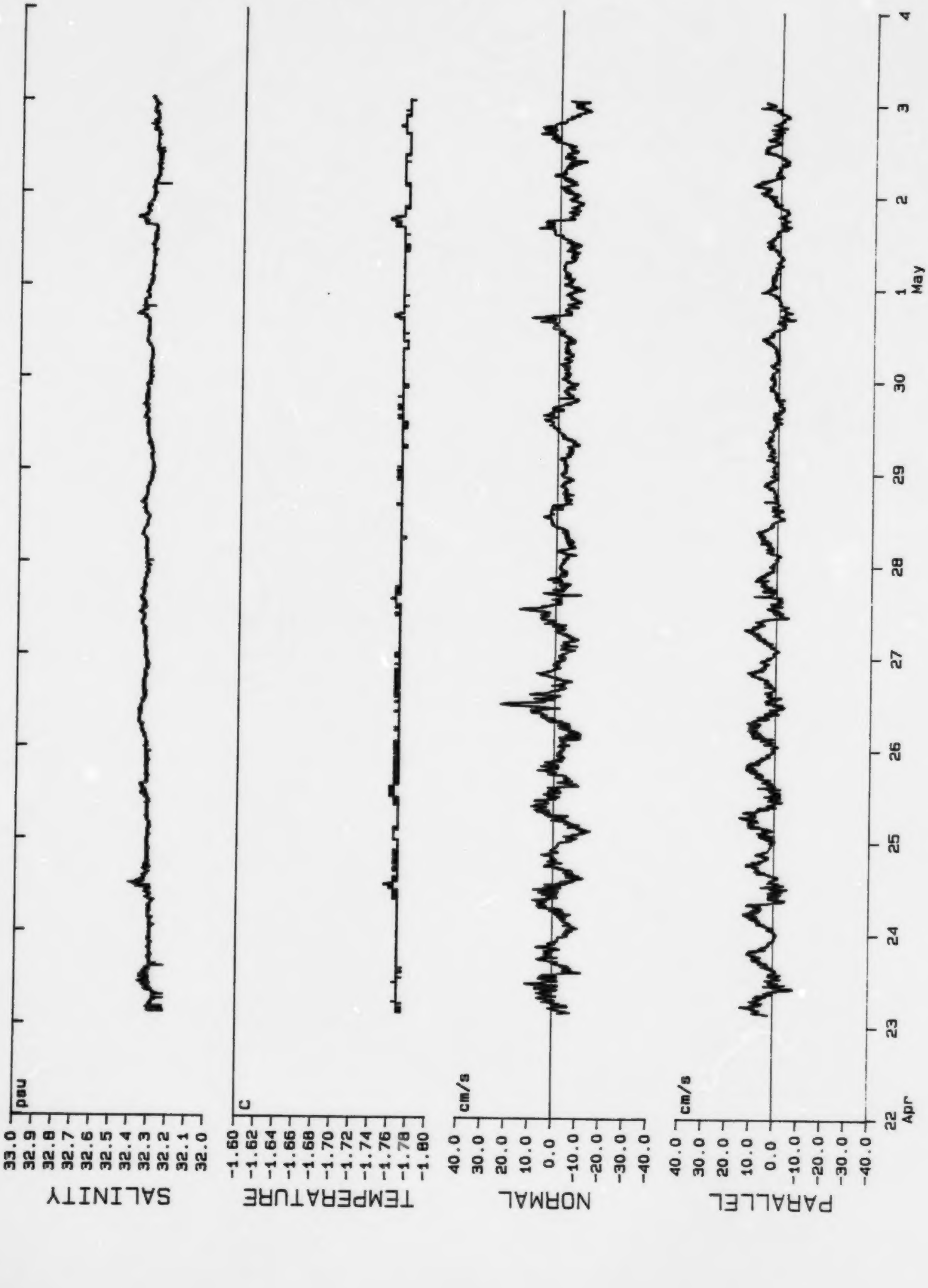
# CURRENT METER S/N 4402
Instrument depth: 33.60 m



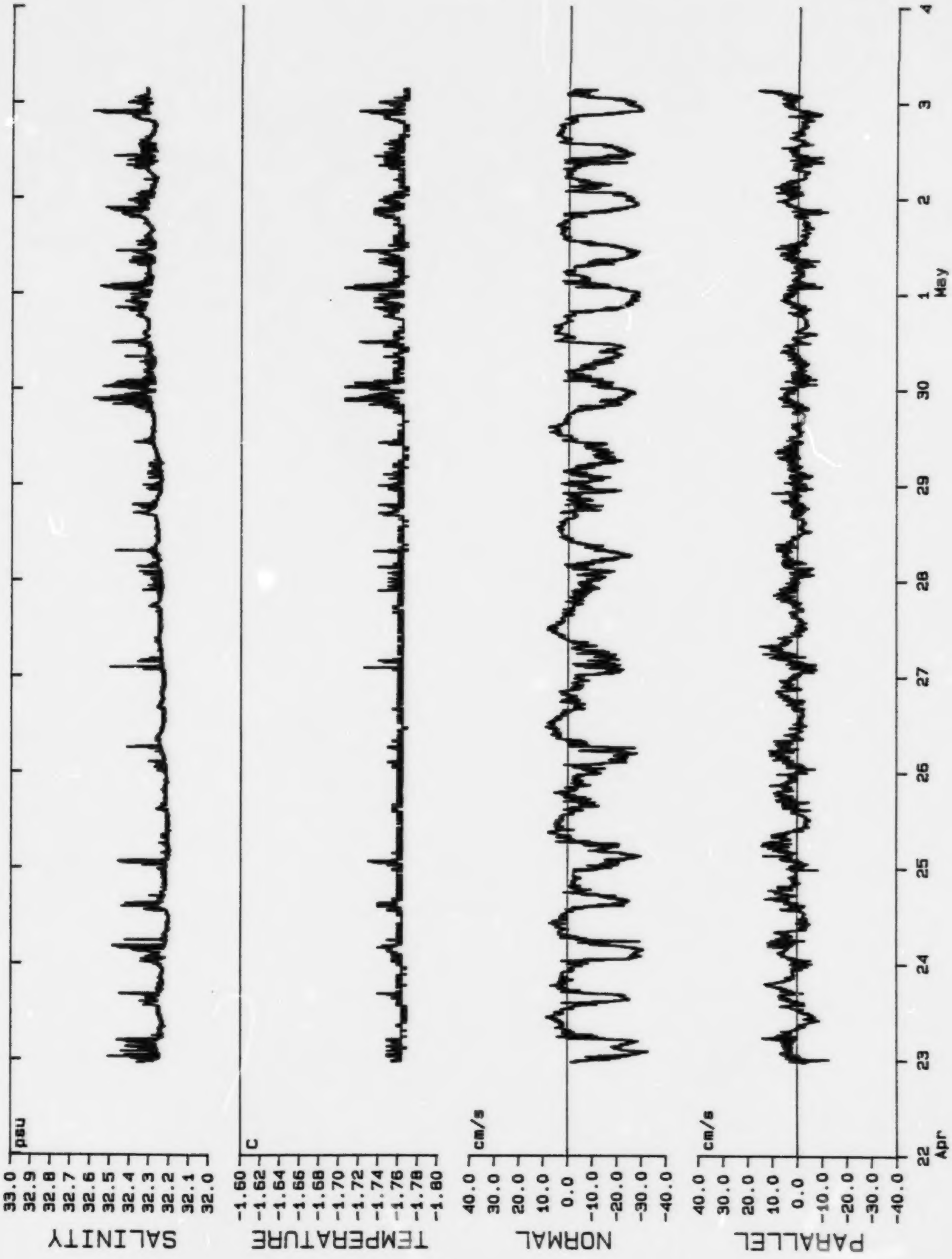
## CURRENT METER S/N 5971
## Instrument depth: 5.60 m



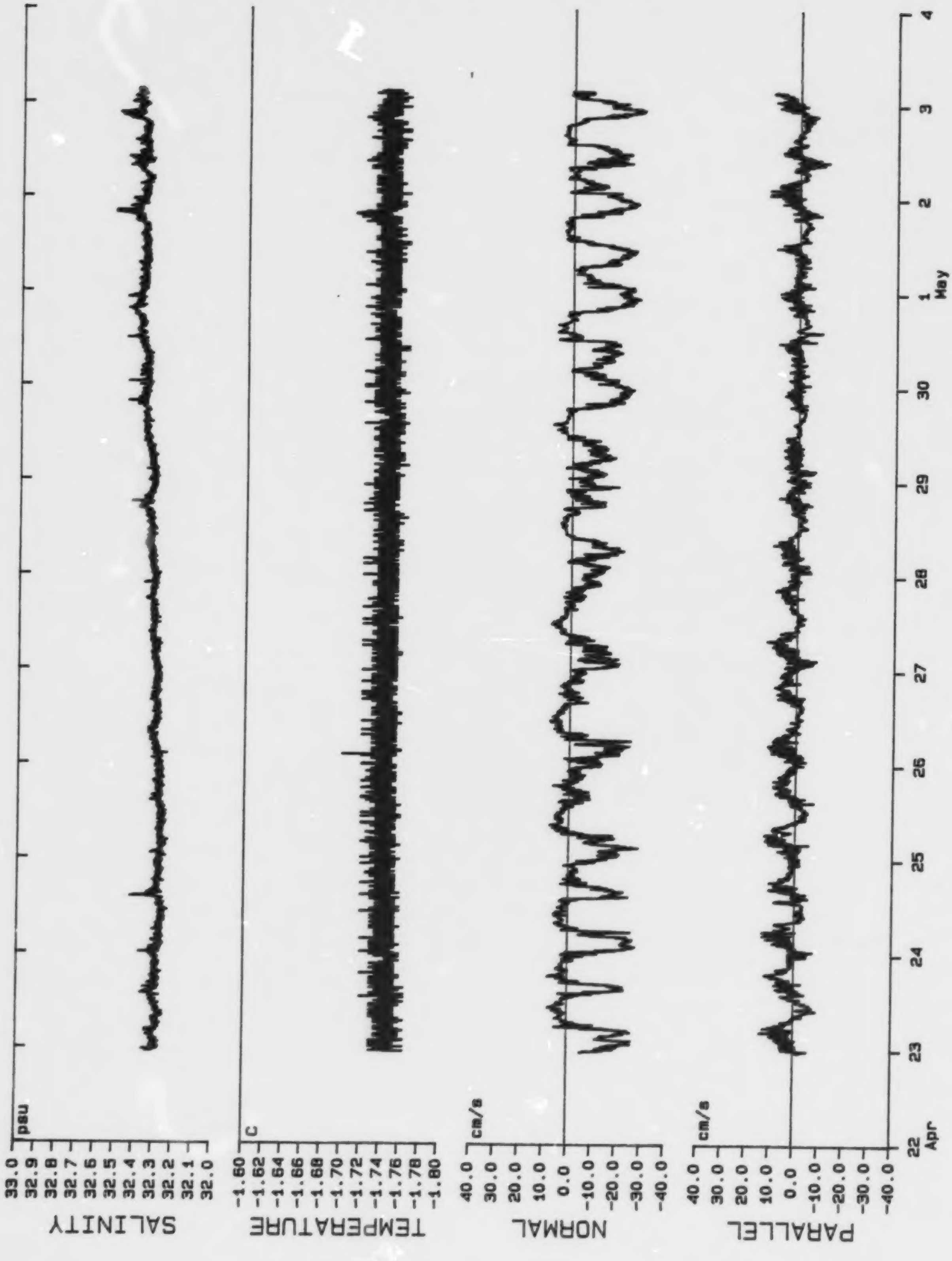
# CURRENT METER S/N 6527
# Instrument depth: 2.60 m



CURRENT METER S/N 6561
Instrument depth: 5.60 m



## CURRENT METER S/N 7919
## Instrument depth: 2.60 m



# Appendix 2

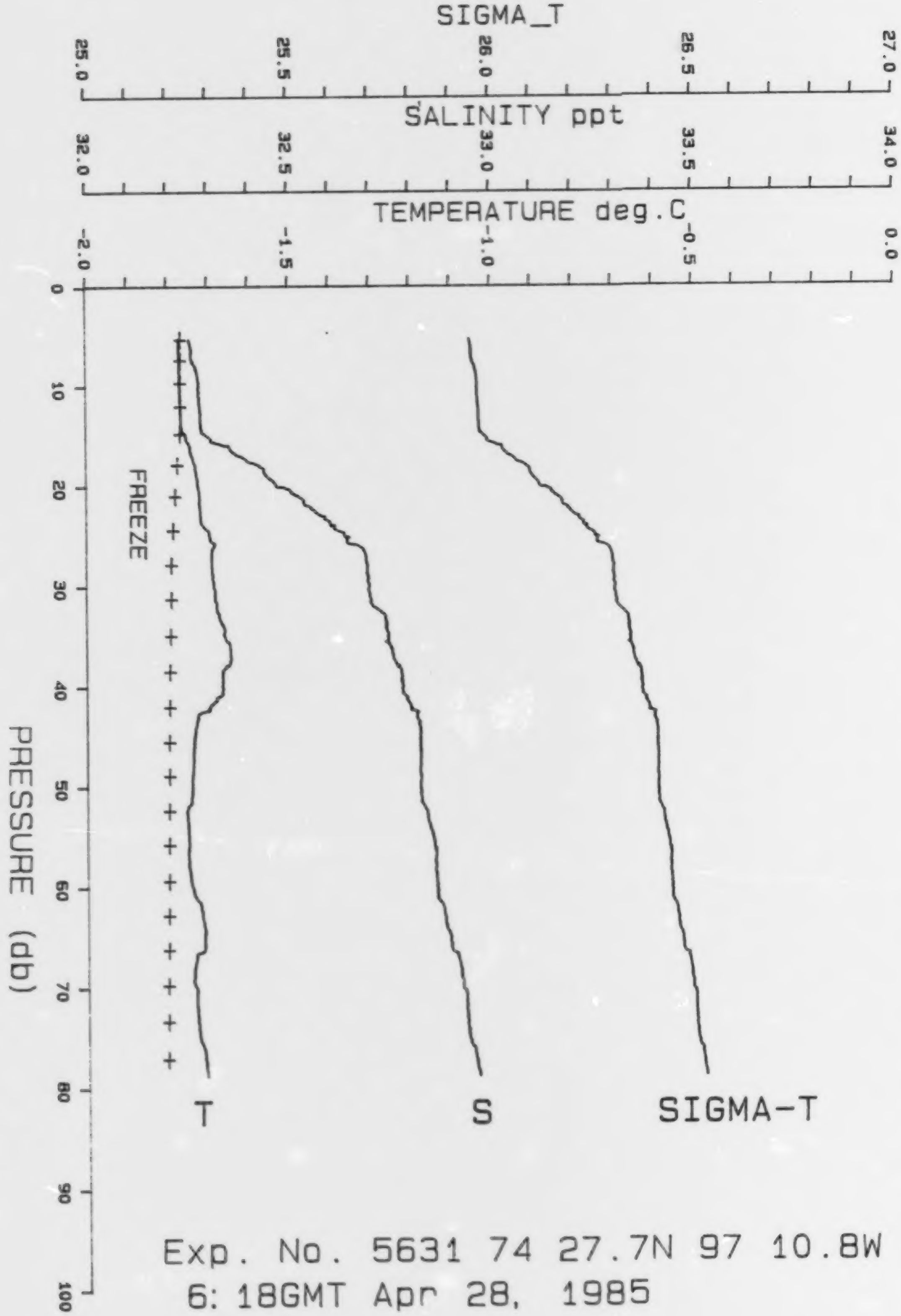
## CTD listings and profile plots

Ice Keel '85 Experiment Barrow Strait Exp. No. 5631

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0618

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.2 | -1.771 | 0.59562 | 32.256 | 25.949 | 1437.2 |
| 6.0 | -1.772 | 0.59570 | 32.261 | 25.953 | 1437.2 |
| 7.0 | -1.769 | 0.59572 | 32.259 | 25.952 | 1437.2 |
| 8.0 | -1.769 | 0.59591 | 32.270 | 25.960 | 1437.3 |
| 9.0 | -1.769 | 0.59604 | 32.277 | 25.966 | 1437.3 |
| 10.0 | -1.768 | 0.59607 | 32.277 | 25.966 | 1437.3 |
| 11.0 | -1.768 | 0.59612 | 32.279 | 25.968 | 1437.3 |
| 12.0 | -1.766 | 0.59619 | 32.280 | 25.969 | 1437.4 |
| 13.0 | -1.765 | 0.59622 | 32.281 | 25.969 | 1437.4 |
| 14.0 | -1.765 | 0.59627 | 32.283 | 25.971 | 1437.4 |
| 15.0 | -1.753 | 0.59679 | 32.300 | 25.985 | 1437.5 |
| 16.0 | -1.743 | 0.59787 | 32.353 | 26.027 | 1437.6 |
| 17.0 | -1.737 | 0.59848 | 32.382 | 26.051 | 1437.7 |
| 18.0 | -1.730 | 0.59940 | 32.428 | 26.089 | 1437.8 |
| 19.0 | -1.727 | 0.59978 | 32.447 | 26.104 | 1437.9 |
| 20.0 | -1.725 | 0.60021 | 32.470 | 26.122 | 1437.9 |
| 21.0 | -1.720 | 0.60123 | 32.523 | 26.166 | 1438.1 |
| 22.0 | -1.720 | 0.60168 | 32.551 | 26.188 | 1438.1 |
| 23.0 | -1.719 | 0.60234 | 32.588 | 26.218 | 1438.2 |
| 24.0 | -1.711 | 0.60281 | 32.606 | 26.233 | 1438.3 |
| 25.0 | -1.696 | 0.60362 | 32.637 | 26.257 | 1438.4 |
| 26.0 | -1.686 | 0.60446 | 32.675 | 26.288 | 1438.5 |
| 27.0 | -1.691 | 0.60460 | 32.688 | 26.299 | 1438.5 |
| 28.0 | -1.690 | 0.60468 | 32.692 | 26.302 | 1438.5 |
| 29.0 | -1.687 | 0.60477 | 32.693 | 26.303 | 1438.6 |
| 30.0 | -1.687 | 0.60486 | 32.698 | 26.306 | 1438.6 |
| 31.0 | -1.681 | 0.60498 | 32.699 | 26.307 | 1438.6 |
| 32.0 | -1.678 | 0.60521 | 32.708 | 26.315 | 1438.7 |
| 33.0 | -1.673 | 0.60581 | 32.737 | 26.338 | 1438.8 |
| 34.0 | -1.662 | 0.60606 | 32.739 | 26.339 | 1438.8 |
| 35.0 | -1.658 | 0.60621 | 32.743 | 26.343 | 1438.9 |
| 37.5 | -1.648 | 0.60674 | 32.763 | 26.358 | 1439.0 |
| 40.0 | -1.665 | 0.60673 | 32.779 | 26.372 | 1439.0 |
| 42.5 | -1.719 | 0.60642 | 32.818 | 26.405 | 1438.8 |
| 45.0 | -1.736 | 0.60619 | 32.822 | 26.409 | 1438.8 |
| 47.5 | -1.739 | 0.60616 | 32.822 | 26.409 | 1438.8 |
| 50.0 | -1.743 | 0.60614 | 32.823 | 26.410 | 1438.8 |
| 55.0 | -1.750 | 0.60653 | 32.851 | 26.433 | 1438.9 |
| 60.0 | -1.740 | 0.60694 | 32.862 | 26.441 | 1439.0 |
| 65.0 | -1.713 | 0.60803 | 32.894 | 26.466 | 1439.3 |
| 70.0 | -1.732 | 0.60824 | 32.924 | 26.491 | 1439.3 |
| 75.0 | -1.726 | 0.60868 | 32.940 | 26.504 | 1439.5 |
| 78.7 | -1.710 | 0.60941 | 32.964 | 26.523 | 1439.6 |



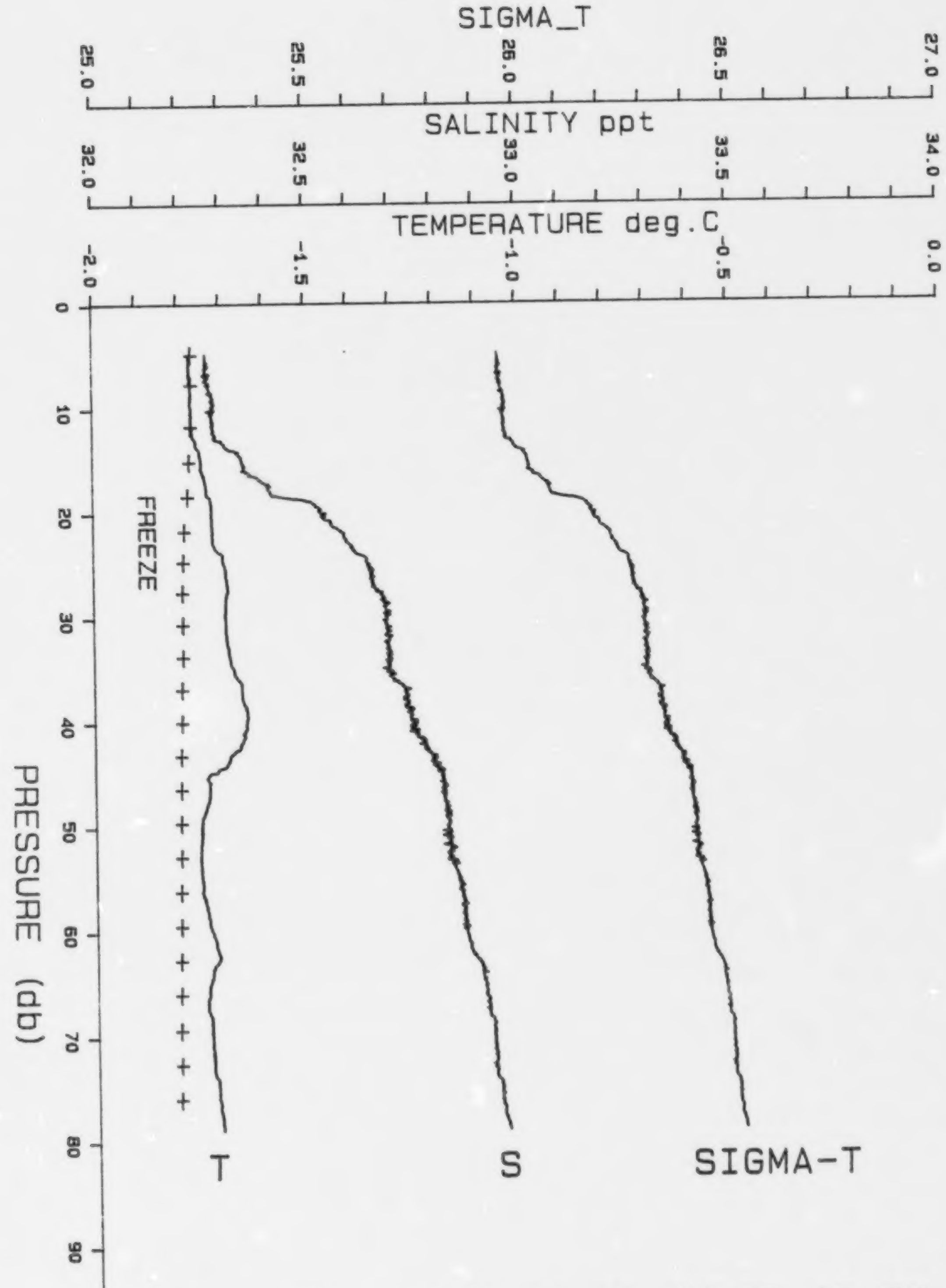
Exp. No. 5631 74 27.7N 97 10.8W
6: 18GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5632

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 0646

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 4.8 | -1.771 | 0.59580 | 32.267 | 25.959 | 1437.2 |
| 5.0 | -1.772 | 0.59581 | 32.268 | 25.959 | 1437.2 |
| 6.0 | -1.771 | 0.59583 | 32.268 | 25.959 | 1437.2 |
| 7.0 | -1.770 | 0.59595 | 32.274 | 25.964 | 1437.2 |
| 8.0 | -1.768 | 0.59602 | 32.274 | 25.964 | 1437.3 |
| 9.0 | -1.767 | 0.59618 | 32.283 | 25.971 | 1437.3 |
| 10.0 | -1.766 | 0.59625 | 32.285 | 25.973 | 1437.3 |
| 11.0 | -1.767 | 0.59618 | 32.282 | 25.970 | 1437.3 |
| 12.0 | -1.767 | 0.59626 | 32.285 | 25.973 | 1437.4 |
| 13.0 | -1.757 | 0.59661 | 32.294 | 25.980 | 1437.4 |
| 14.0 | -1.747 | 0.59747 | 32.335 | 26.013 | 1437.6 |
| 15.0 | -1.744 | 0.59785 | 32.353 | 26.027 | 1437.6 |
| 16.0 | -1.743 | 0.59803 | 32.362 | 26.035 | 1437.6 |
| 17.0 | -1.735 | 0.59885 | 32.402 | 26.067 | 1437.8 |
| 18.0 | -1.732 | 0.59921 | 32.419 | 26.081 | 1437.8 |
| 19.0 | -1.721 | 0.60109 | 32.518 | 26.162 | 1438.0 |
| 20.0 | -1.722 | 0.60148 | 32.541 | 26.180 | 1438.1 |
| 21.0 | -1.721 | 0.60186 | 32.563 | 26.198 | 1438.1 |
| 22.0 | -1.719 | 0.60237 | 32.590 | 26.220 | 1438.2 |
| 23.0 | -1.716 | 0.60272 | 32.607 | 26.233 | 1438.2 |
| 24.0 | -1.695 | 0.60355 | 32.632 | 26.253 | 1438.4 |
| 25.0 | -1.690 | 0.60390 | 32.648 | 26.266 | 1438.4 |
| 26.0 | -1.690 | 0.60407 | 32.657 | 26.273 | 1438.5 |
| 27.0 | -1.684 | 0.60422 | 32.659 | 26.275 | 1438.5 |
| 28.0 | -1.688 | 0.60453 | 32.681 | 26.293 | 1438.5 |
| 29.0 | -1.688 | 0.60465 | 32.688 | 26.298 | 1438.6 |
| 30.0 | -1.690 | 0.60468 | 32.691 | 26.301 | 1438.6 |
| 31.0 | -1.687 | 0.60470 | 32.689 | 26.299 | 1438.6 |
| 32.0 | -1.688 | 0.60487 | 32.698 | 26.307 | 1438.6 |
| 33.0 | -1.683 | 0.60491 | 32.695 | 26.304 | 1438.7 |
| 34.0 | -1.678 | 0.60501 | 32.695 | 26.304 | 1438.7 |
| 35.0 | -1.669 | 0.60518 | 32.695 | 26.304 | 1438.8 |
| 37.5 | -1.651 | 0.60623 | 32.735 | 26.336 | 1438.9 |
| 40.0 | -1.642 | 0.60672 | 32.752 | 26.350 | 1439.0 |
| 42.5 | -1.661 | 0.60680 | 32.777 | 26.370 | 1439.0 |
| 45.0 | -1.734 | 0.60617 | 32.819 | 26.406 | 1438.8 |
| 47.5 | -1.734 | 0.60629 | 32.824 | 26.410 | 1438.8 |
| 50.0 | -1.751 | 0.60609 | 32.830 | 26.415 | 1438.8 |
| 55.0 | -1.749 | 0.60662 | 32.856 | 26.436 | 1438.9 |
| 60.0 | -1.726 | 0.60734 | 32.871 | 26.448 | 1439.1 |
| 65.0 | -1.737 | 0.60798 | 32.917 | 26.486 | 1439.2 |
| 70.0 | -1.731 | 0.60844 | 32.935 | 26.500 | 1439.4 |
| 75.0 | -1.717 | 0.60905 | 32.953 | 26.514 | 1439.5 |
| 78.9 | -1.707 | 0.60955 | 32.969 | 26.528 | 1439.7 |



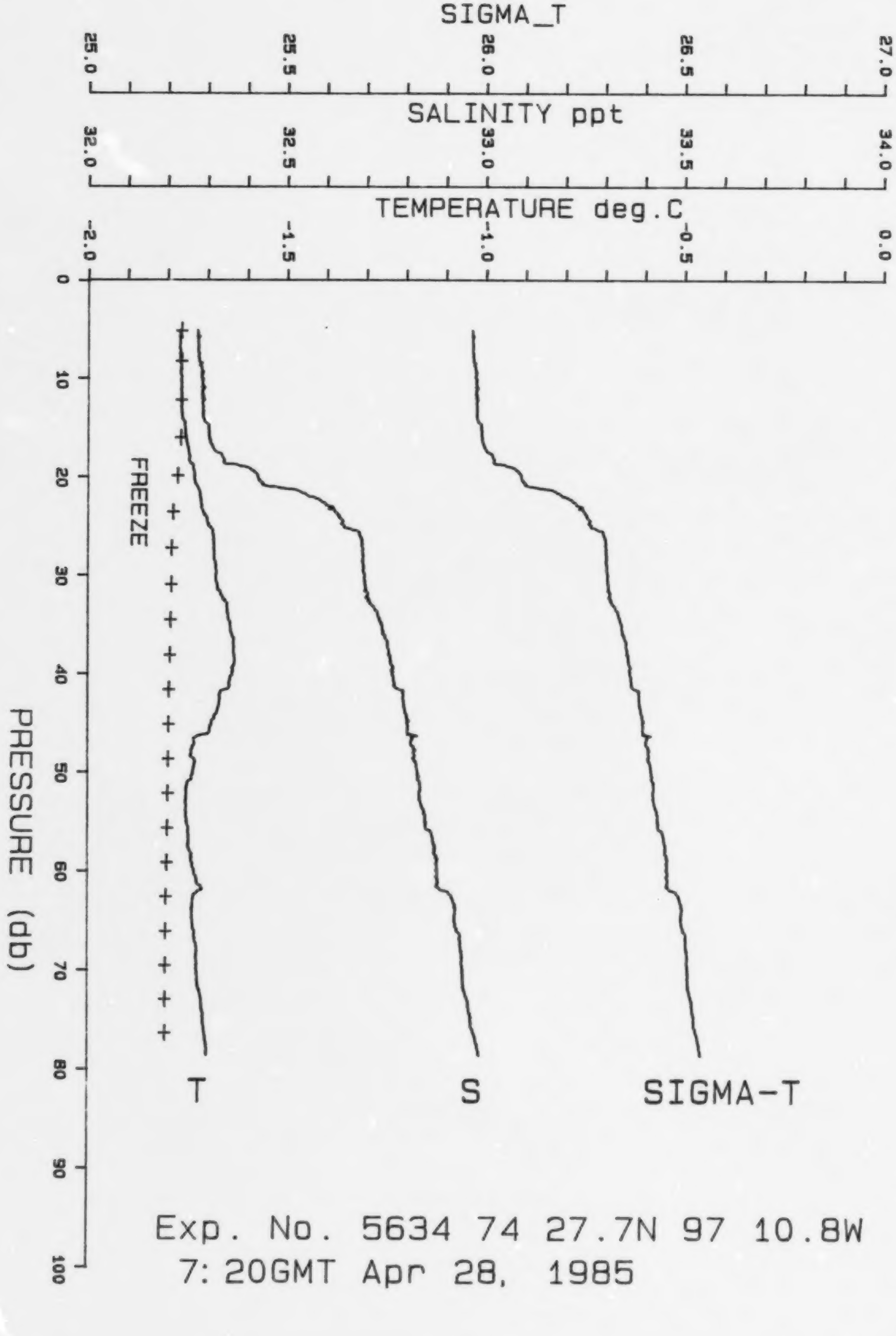
Exp. No. 5632 74 27.7N 97 10.8W
6: 46GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5634

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 0720

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.1 | −1.770 | 0.59593 | 32.273 | 25.963 | 1437.2 |
| 6.0 | −1.770 | 0.59594 | 32.274 | 25.964 | 1437.2 |
| 7.0 | −1.772 | 0.59595 | 32.275 | 25.965 | 1437.2 |
| 8.0 | −1.772 | 0.59600 | 32.278 | 25.967 | 1437.3 |
| 9.0 | −1.768 | 0.59616 | 32.283 | 25.971 | 1437.3 |
| 10.0 | −1.768 | 0.59622 | 32.285 | 25.973 | 1437.3 |
| 11.0 | −1.766 | 0.59629 | 32.287 | 25.974 | 1437.3 |
| 12.0 | −1.767 | 0.59629 | 32.287 | 25.975 | 1437.4 |
| 13.0 | −1.767 | 0.59629 | 32.286 | 25.974 | 1437.4 |
| 14.0 | −1.765 | 0.59635 | 32.287 | 25.974 | 1437.4 |
| 15.0 | −1.759 | 0.59673 | 32.303 | 25.987 | 1437.5 |
| 16.0 | −1.756 | 0.59681 | 32.304 | 25.988 | 1437.5 |
| 17.0 | −1.750 | 0.59704 | 32.310 | 25.993 | 1437.6 |
| 18.0 | −1.746 | 0.59759 | 32.338 | 26.015 | 1437.6 |
| 19.0 | −1.738 | 0.59872 | 32.396 | 26.062 | 1437.8 |
| 20.0 | −1.735 | 0.59928 | 32.425 | 26.086 | 1437.8 |
| 21.0 | −1.726 | 0.60003 | 32.459 | 26.114 | 1437.9 |
| 22.0 | −1.720 | 0.60175 | 32.554 | 26.191 | 1438.1 |
| 23.0 | −1.716 | 0.60276 | 32.609 | 26.235 | 1438.2 |
| 24.0 | −1.704 | 0.60331 | 32.629 | 26.251 | 1438.3 |
| 25.0 | −1.697 | 0.60367 | 32.642 | 26.261 | 1438.4 |
| 26.0 | −1.685 | 0.60457 | 32.681 | 26.293 | 1438.5 |
| 27.0 | −1.685 | 0.60468 | 32.687 | 26.298 | 1438.5 |
| 28.0 | −1.685 | 0.60475 | 32.691 | 26.301 | 1438.6 |
| 29.0 | −1.679 | 0.60487 | 32.690 | 26.300 | 1438.6 |
| 30.0 | −1.680 | 0.60494 | 32.695 | 26.304 | 1438.6 |
| 31.0 | −1.675 | 0.60504 | 32.695 | 26.304 | 1438.7 |
| 32.0 | −1.665 | 0.60533 | 32.700 | 26.308 | 1438.7 |
| 33.0 | −1.650 | 0.60582 | 32.713 | 26.318 | 1438.8 |
| 34.0 | −1.649 | 0.60611 | 32.729 | 26.331 | 1438.9 |
| 35.0 | −1.645 | 0.60639 | 32.739 | 26.339 | 1438.9 |
| 37.5 | −1.635 | 0.60686 | 32.755 | 26.352 | 1439.0 |
| 40.0 | −1.638 | 0.60698 | 32.763 | 26.359 | 1439.1 |
| 42.5 | −1.669 | 0.60688 | 32.791 | 26.382 | 1439.0 |
| 45.0 | −1.689 | 0.60670 | 32.800 | 26.390 | 1439.0 |
| 47.5 | −1.737 | 0.60611 | 32.817 | 26.404 | 1438.8 |
| 50.0 | −1.739 | 0.60631 | 32.829 | 26.415 | 1438.8 |
| 55.0 | −1.751 | 0.60642 | 32.846 | 26.429 | 1438.9 |
| 60.0 | −1.734 | 0.60733 | 32.878 | 26.454 | 1439.1 |
| 65.0 | −1.736 | 0.60801 | 32.919 | 26.487 | 1439.2 |
| 70.0 | −1.726 | 0.60861 | 32.940 | 26.504 | 1439.4 |
| 75.0 | −1.711 | 0.60931 | 32.961 | 26.521 | 1439.6 |
| 78.6 | −1.703 | 0.60985 | 32.982 | 26.538 | 1439.7 |



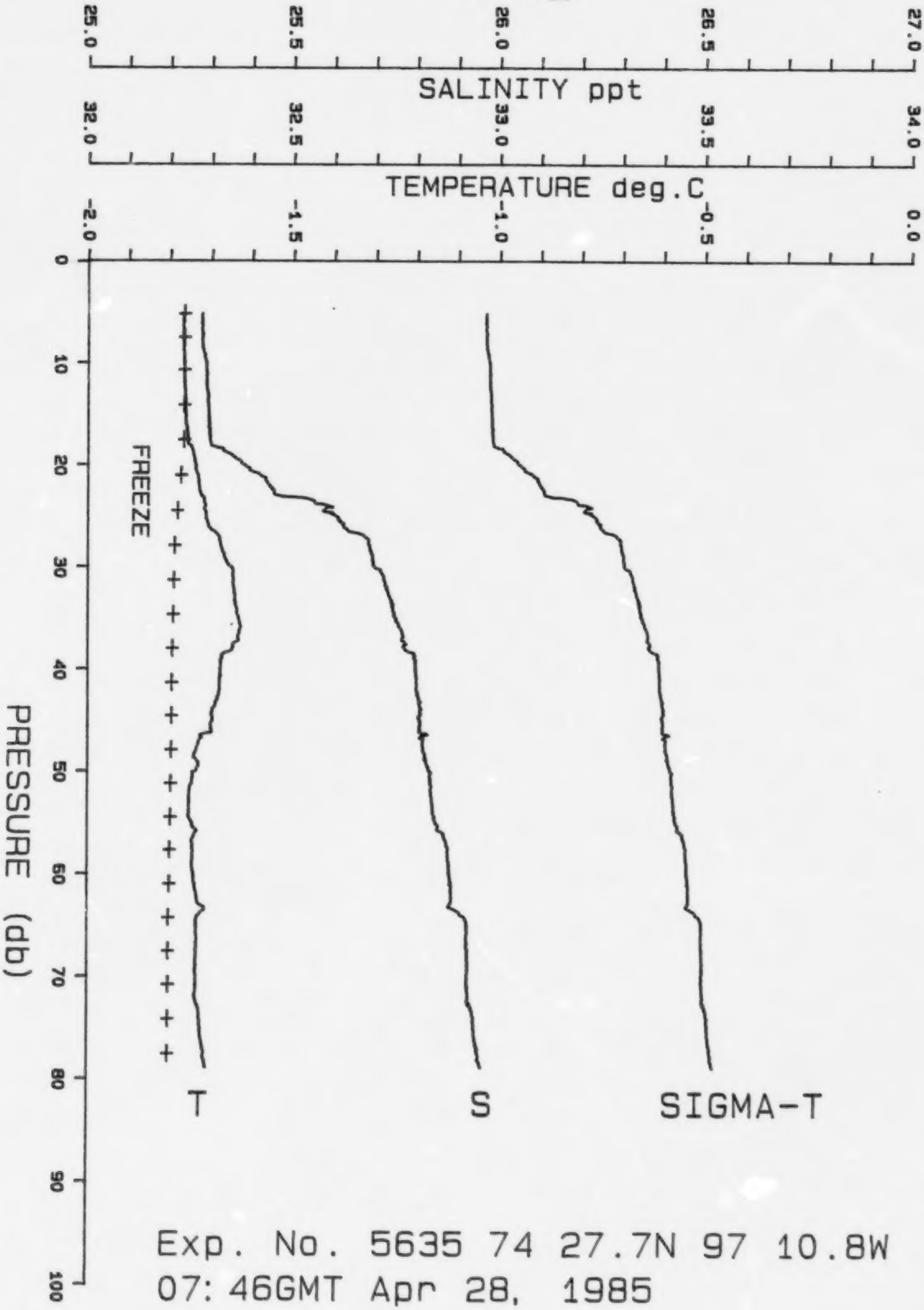
Exp. No. 5634 74 27.7N 97 10.8W
7: 20GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5635

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 0746

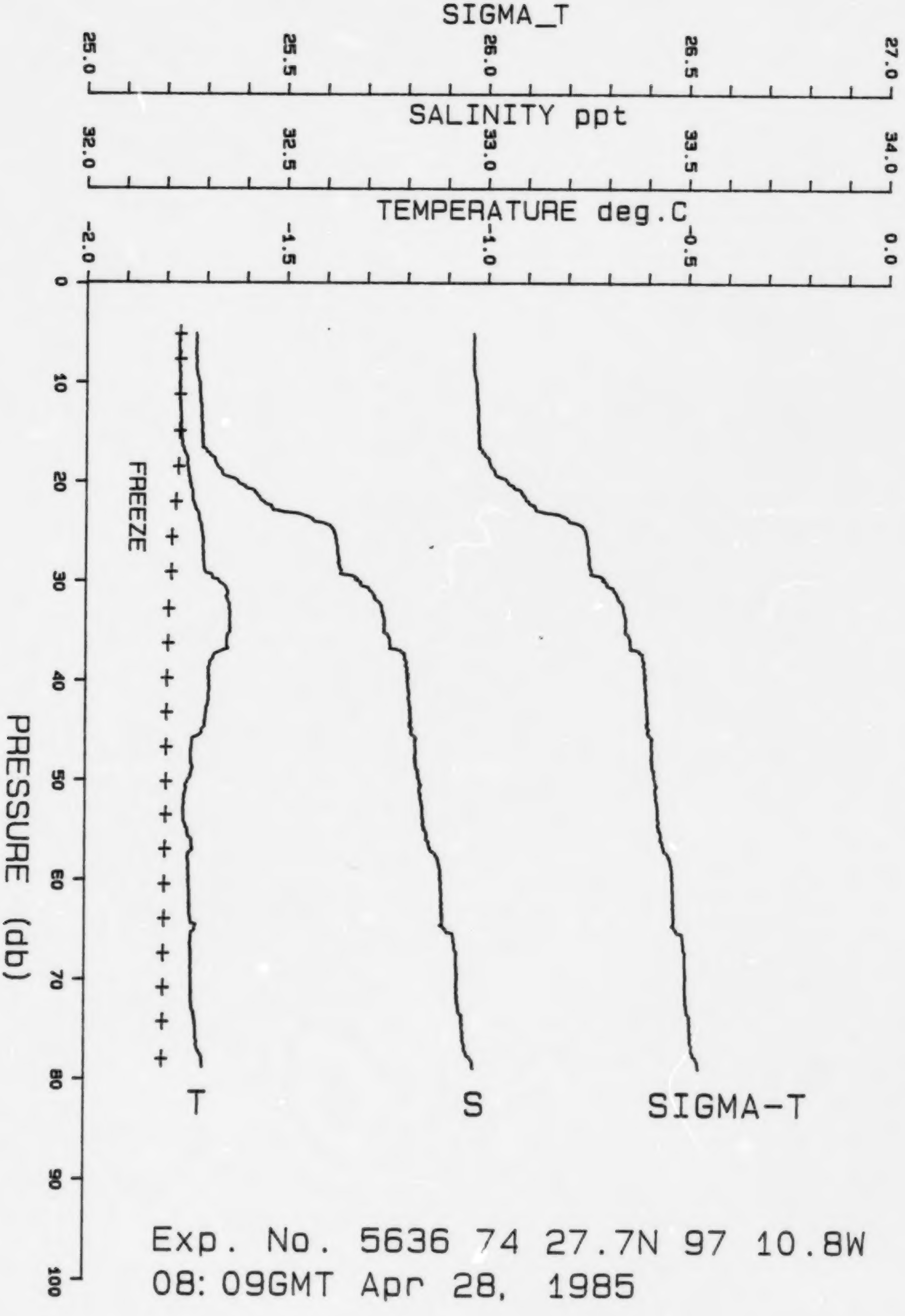
| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.1 | −1.771 | 0.59595 | 32.276 | 25.966 | 1437.2 |
| 6.0 | −1.769 | 0.59595 | 32.273 | 25.963 | 1437.2 |
| 7.0 | −1.772 | 0.59599 | 32.277 | 25.967 | 1437.2 |
| 8.0 | −1.770 | 0.59601 | 32.276 | 25.966 | 1437.3 |
| 9.0 | −1.768 | 0.59611 | 32.280 | 25.969 | 1437.3 |
| 10.0 | −1.768 | 0.59622 | 32.285 | 25.973 | 1437.3 |
| 11.0 | −1.769 | 0.59624 | 32.287 | 25.974 | 1437.3 |
| 12.0 | −1.768 | 0.59625 | 32.286 | 25.973 | 1437.4 |
| 13.0 | −1.767 | 0.59635 | 32.290 | 25.977 | 1437.4 |
| 14.0 | −1.767 | 0.59638 | 32.291 | 25.978 | 1437.4 |
| 15.0 | −1.764 | 0.59644 | 32.291 | 25.978 | 1437.4 |
| 16.0 | −1.763 | 0.59646 | 32.291 | 25.977 | 1437.4 |
| 17.0 | −1.759 | 0.59657 | 32.292 | 25.978 | 1437.5 |
| 18.0 | −1.757 | 0.59669 | 32.296 | 25.982 | 1437.5 |
| 19.0 | −1.745 | 0.59776 | 32.346 | 26.022 | 1437.7 |
| 20.0 | −1.740 | 0.59841 | 32.379 | 26.049 | 1437.7 |
| 21.0 | −1.734 | 0.59918 | 32.418 | 26.080 | 1437.8 |
| 22.0 | −1.731 | 0.59960 | 32.439 | 26.097 | 1437.9 |
| 23.0 | −1.725 | 0.60015 | 32.464 | 26.118 | 1438.0 |
| 24.0 | −1.716 | 0.60236 | 32.585 | 26.215 | 1438.2 |
| 25.0 | −1.714 | 0.60267 | 32.601 | 26.229 | 1438.3 |
| 26.0 | −1.709 | 0.60308 | 32.619 | 26.243 | 1438.3 |
| 27.0 | −1.682 | 0.60443 | 32.669 | 26.283 | 1438.5 |
| 28.0 | −1.678 | 0.60475 | 32.683 | 26.294 | 1438.6 |
| 29.0 | −1.670 | 0.60501 | 32.689 | 26.299 | 1438.6 |
| 30.0 | −1.652 | 0.60545 | 32.695 | 26.303 | 1438.8 |
| 31.0 | −1.648 | 0.60589 | 32.716 | 26.321 | 1438.8 |
| 32.0 | −1.647 | 0.60605 | 32.723 | 26.326 | 1438.9 |
| 33.0 | −1.644 | 0.60626 | 32.732 | 26.334 | 1438.9 |
| 34.0 | −1.640 | 0.60646 | 32.739 | 26.339 | 1438.9 |
| 35.0 | −1.637 | 0.60669 | 32.748 | 26.347 | 1439.0 |
| 37.5 | −1.651 | 0.60684 | 32.771 | 26.365 | 1439.0 |
| 40.0 | −1.679 | 0.60671 | 32.794 | 26.384 | 1438.9 |
| 42.5 | −1.684 | 0.60674 | 32.799 | 26.389 | 1438.9 |
| 45.0 | −1.698 | 0.60657 | 32.803 | 26.392 | 1438.9 |
| 47.5 | −1.735 | 0.60608 | 32.813 | 26.401 | 1438.8 |
| 50.0 | −1.745 | 0.60627 | 32.834 | 26.419 | 1438.8 |
| 55.0 | −1.747 | 0.60647 | 32.844 | 26.427 | 1438.9 |
| 60.0 | −1.745 | 0.60715 | 32.880 | 26.456 | 1439.0 |
| 65.0 | −1.738 | 0.60805 | 32.923 | 26.490 | 1439.2 |
| 70.0 | −1.737 | 0.60809 | 32.921 | 26.489 | 1439.3 |
| 75.0 | −1.727 | 0.60862 | 32.938 | 26.503 | 1439.5 |
| 78.8 | −1.713 | 0.60920 | 32.955 | 26.516 | 1439.6 |



Exp. No. 5635 74 27.7N 97 10.8W
07: 46GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5636
Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 0809

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.1 | -1.770 | 0.59593 | 32.273 | 25.963 | 1437.2 |
| 6.0 | -1.771 | 0.59593 | 32.274 | 25.964 | 1437.2 |
| 7.0 | -1.769 | 0.59595 | 32.272 | 25.962 | 1437.2 |
| 8.0 | -1.770 | 0.59597 | 32.274 | 25.964 | 1437.3 |
| 9.0 | -1.767 | 0.59604 | 32.275 | 25.965 | 1437.3 |
| 10.0 | -1.770 | 0.59614 | 32.282 | 25.971 | 1437.3 |
| 11.0 | -1.767 | 0.59616 | 32.281 | 25.969 | 1437.3 |
| 12.0 | -1.767 | 0.59623 | 32.283 | 25.971 | 1437.4 |
| 13.0 | -1.765 | 0.59630 | 32.286 | 25.973 | 1437.4 |
| 14.0 | -1.764 | 0.59635 | 32.286 | 25.973 | 1437.4 |
| 15.0 | -1.763 | 0.59638 | 32.286 | 25.974 | 1437.4 |
| 16.0 | -1.761 | 0.59646 | 32.289 | 25.976 | 1437.5 |
| 17.0 | -1.754 | 0.59677 | 32.299 | 25.984 | 1437.5 |
| 18.0 | -1.749 | 0.59727 | 32.322 | 26.003 | 1437.6 |
| 19.0 | -1.745 | 0.59760 | 32.337 | 26.015 | 1437.6 |
| 20.0 | -1.743 | 0.59835 | 32.379 | 26.048 | 1437.7 |
| 21.0 | -1.735 | 0.59921 | 32.420 | 26.082 | 1437.8 |
| 22.0 | -1.733 | 0.59963 | 32.442 | 26.100 | 1437.9 |
| 23.0 | -1.721 | 0.60067 | 32.491 | 26.139 | 1438.0 |
| 24.0 | -1.718 | 0.60217 | 32.576 | 26.209 | 1438.2 |
| 25.0 | -1.712 | 0.60296 | 32.616 | 26.240 | 1438.3 |
| 26.0 | -1.708 | 0.60313 | 32.621 | 26.245 | 1438.3 |
| 27.0 | -1.708 | 0.60321 | 32.625 | 26.248 | 1438.3 |
| 28.0 | -1.706 | 0.60327 | 32.626 | 26.249 | 1438.4 |
| 29.0 | -1.704 | 0.60347 | 32.635 | 26.256 | 1438.4 |
| 30.0 | -1.669 | 0.60493 | 32.682 | 26.293 | 1438.7 |
| 31.0 | -1.646 | 0.60582 | 32.710 | 26.315 | 1438.8 |
| 32.0 | -1.647 | 0.60612 | 32.727 | 26.330 | 1438.9 |
| 33.0 | -1.642 | 0.60639 | 32.737 | 26.338 | 1438.9 |
| 34.0 | -1.642 | 0.60648 | 32.742 | 26.341 | 1438.9 |
| 35.0 | -1.640 | 0.60648 | 32.740 | 26.339 | 1439.0 |
| 37.5 | -1.684 | 0.60660 | 32.794 | 26.385 | 1438.9 |
| 40.0 | -1.692 | 0.60656 | 32.799 | 26.389 | 1438.9 |
| 42.5 | -1.699 | 0.60661 | 32.808 | 26.396 | 1438.9 |
| 45.0 | -1.711 | 0.60642 | 32.809 | 26.397 | 1438.9 |
| 47.5 | -1.737 | 0.60615 | 32.819 | 26.407 | 1438.8 |
| 50.0 | -1.747 | 0.60620 | 32.831 | 26.416 | 1438.8 |
| 55.0 | -1.746 | 0.60654 | 32.847 | 26.429 | 1438.9 |
| 60.0 | -1.743 | 0.60731 | 32.887 | 26.462 | 1439.1 |
| 65.0 | -1.727 | 0.60784 | 32.898 | 26.470 | 1439.2 |
| 70.0 | -1.735 | 0.60822 | 32.926 | 26.493 | 1439.3 |
| 75.0 | -1.723 | 0.60873 | 32.941 | 26.505 | 1439.5 |
| 78.8 | -1.706 | 0.60957 | 32.969 | 26.527 | 1439.7 |



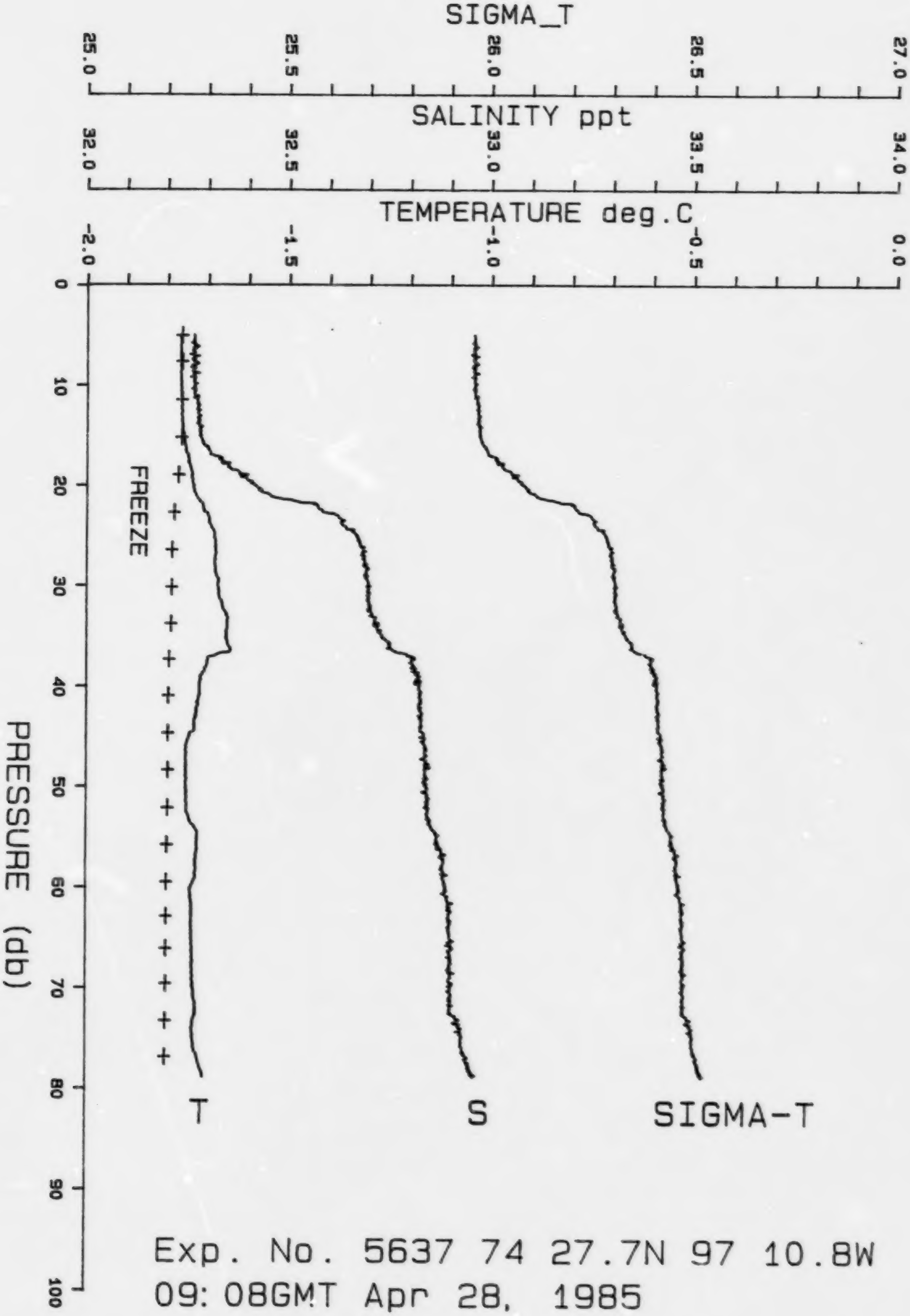
Exp. No. 5636 74 27.7N 97 10.8W
08: 09GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5637

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 0908

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.770 | 0.59578 | 32.264 | 25.956 | 1437.2 |
| 6.0 | -1.771 | 0.59577 | 32.264 | 25.956 | 1437.2 |
| 7.0 | -1.769 | 0.59578 | 32.262 | 25.954 | 1437.2 |
| 8.0 | -1.770 | 0.59570 | 32.258 | 25.951 | 1437.2 |
| 9.0 | -1.769 | 0.59583 | 32.264 | 25.956 | 1437.3 |
| 10.0 | -1.769 | 0.59585 | 32.265 | 25.956 | 1437.3 |
| 11.0 | -1.767 | 0.59592 | 32.266 | 25.958 | 1437.3 |
| 12.0 | -1.766 | 0.59607 | 32.273 | 25.963 | 1437.3 |
| 13.0 | -1.767 | 0.59617 | 32.279 | 25.968 | 1437.4 |
| 14.0 | -1.766 | 0.59619 | 32.280 | 25.968 | 1437.4 |
| 15.0 | -1.761 | 0.59631 | 32.280 | 25.969 | 1437.4 |
| 16.0 | -1.758 | 0.59658 | 32.292 | 25.978 | 1437.5 |
| 17.0 | -1.749 | 0.59712 | 32.314 | 25.996 | 1437.6 |
| 18.0 | -1.747 | 0.59775 | 32.348 | 26.024 | 1437.6 |
| 19.0 | -1.742 | 0.59844 | 32.384 | 26.053 | 1437.7 |
| 20.0 | -1.736 | 0.59913 | 32.417 | 26.079 | 1437.8 |
| 21.0 | -1.731 | 0.59983 | 32.453 | 26.109 | 1437.9 |
| 22.0 | -1.713 | 0.60209 | 32.568 | 26.201 | 1438.2 |
| 23.0 | -1.701 | 0.60321 | 32.620 | 26.243 | 1438.3 |
| 24.0 | -1.693 | 0.60361 | 32.633 | 26.254 | 1438.4 |
| 25.0 | -1.685 | 0.60432 | 32.667 | 26.281 | 1438.5 |
| 26.0 | -1.683 | 0.60448 | 32.674 | 26.287 | 1438.5 |
| 27.0 | -1.684 | 0.60466 | 32.684 | 26.296 | 1438.5 |
| 28.0 | -1.684 | 0.60467 | 32.685 | 26.296 | 1438.6 |
| 29.0 | -1.680 | 0.60480 | 32.687 | 26.298 | 1438.6 |
| 30.0 | -1.676 | 0.60507 | 32.698 | 26.306 | 1438.6 |
| 31.0 | -1.675 | 0.60502 | 32.694 | 26.303 | 1438.7 |
| 32.0 | -1.666 | 0.60523 | 32.695 | 26.304 | 1438.7 |
| 33.0 | -1.654 | 0.60558 | 32.703 | 26.310 | 1438.8 |
| 34.0 | -1.654 | 0.60582 | 32.716 | 26.321 | 1438.8 |
| 35.0 | -1.655 | 0.60598 | 32.726 | 26.328 | 1438.9 |
| 37.5 | -1.704 | 0.60635 | 32.801 | 26.391 | 1438.8 |
| 40.0 | -1.721 | 0.60634 | 32.818 | 26.405 | 1438.8 |
| 42.5 | -1.729 | 0.60633 | 32.824 | 26.410 | 1438.8 |
| 45.0 | -1.748 | 0.60598 | 32.823 | 26.410 | 1438.7 |
| 47.5 | -1.754 | 0.60611 | 32.836 | 26.420 | 1438.7 |
| 50.0 | -1.755 | 0.60616 | 32.838 | 26.422 | 1438.8 |
| 55.0 | -1.726 | 0.60717 | 32.863 | 26.442 | 1439.0 |
| 60.0 | -1.744 | 0.60730 | 32.887 | 26.462 | 1439.1 |
| 65.0 | -1.740 | 0.60760 | 32.898 | 26.470 | 1439.2 |
| 70.0 | -1.734 | 0.60777 | 32.899 | 26.471 | 1439.3 |
| 75.0 | -1.737 | 0.60823 | 32.926 | 26.494 | 1439.4 |
| 78.8 | -1.710 | 0.60923 | 32.954 | 26.515 | 1439.6 |

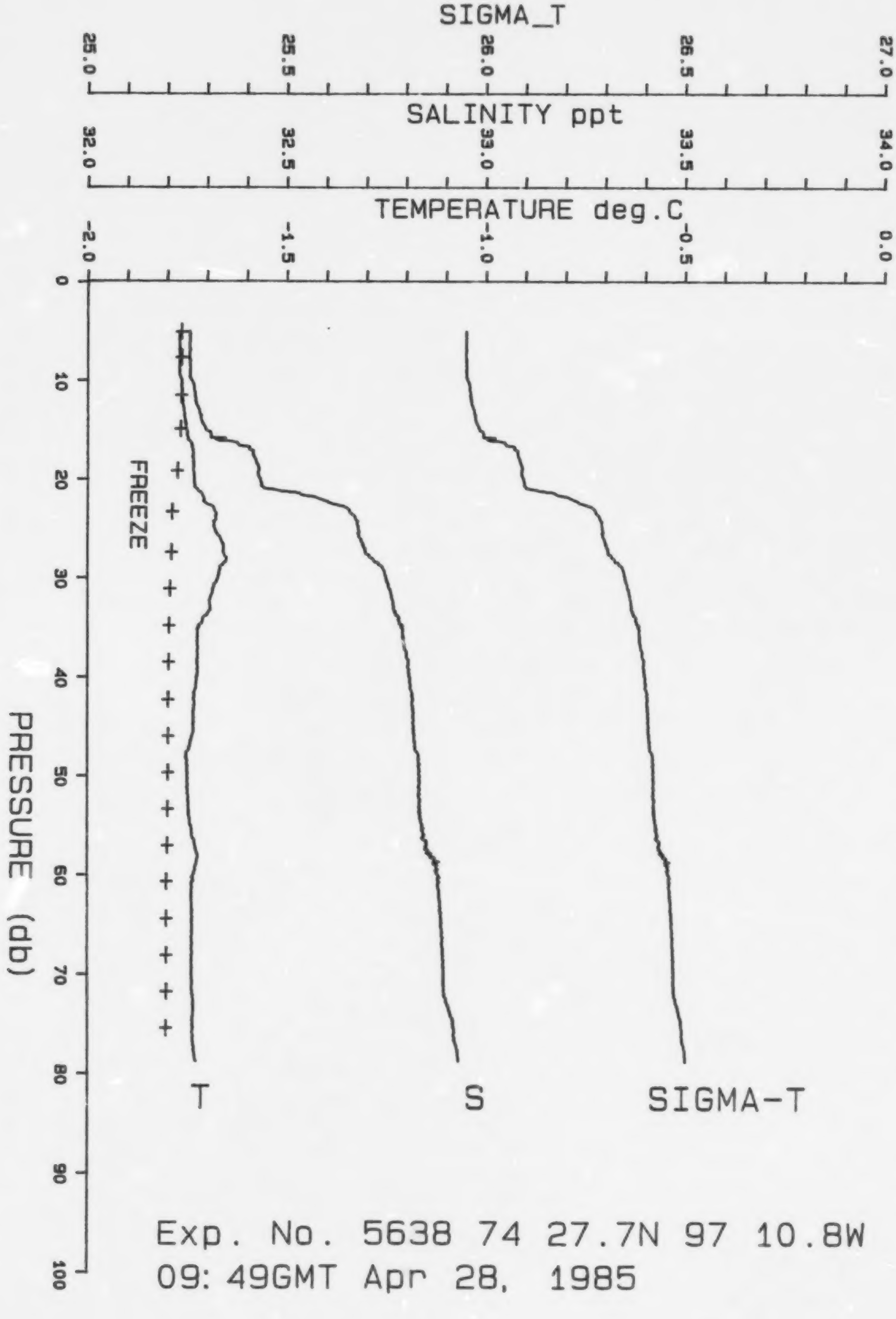

SIGMA_T
25.0
25.5
26.0
26.5
27.0
SALINITY ppt
32.0
32.5
33.0
33.5
34.0
TEMPERATURE deg.C
-2.0
-1.5
-1.0
-0.5
0.0
PRESSURE (db)
0
10
20
30
40
50
60
70
80
90
100
FREEZE
T
S
SIGMA-T
Exp. No. 5637 74 27.7N 97 10.8W
09: 08GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5638

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 0949

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.771 | 0.59561 | 32.255 | 25.949 | 1437.2 |
| 6.0 | -1.771 | 0.59562 | 32.256 | 25.949 | 1437.2 |
| 7.0 | -1.772 | 0.59562 | 32.256 | 25.949 | 1437.2 |
| 8.0 | -1.771 | 0.59564 | 32.256 | 25.949 | 1437.2 |
| 9.0 | -1.770 | 0.59565 | 32.254 | 25.948 | 1437.3 |
| 10.0 | -1.765 | 0.59584 | 32.260 | 25.952 | 1437.3 |
| 11.0 | -1.763 | 0.59599 | 32.266 | 25.957 | 1437.3 |
| 12.0 | -1.763 | 0.59606 | 32.269 | 25.960 | 1437.4 |
| 13.0 | -1.760 | 0.59629 | 32.279 | 25.968 | 1437.4 |
| 14.0 | -1.756 | 0.59646 | 32.283 | 25.971 | 1437.4 |
| 15.0 | -1.752 | 0.59675 | 32.297 | 25.982 | 1437.5 |
| 16.0 | -1.751 | 0.59721 | 32.322 | 26.003 | 1437.6 |
| 17.0 | -1.737 | 0.59889 | 32.406 | 26.070 | 1437.7 |
| 18.0 | -1.736 | 0.59916 | 32.421 | 26.083 | 1437.8 |
| 19.0 | -1.736 | 0.59928 | 32.427 | 26.088 | 1437.8 |
| 20.0 | -1.734 | 0.59941 | 32.432 | 26.092 | 1437.8 |
| 21.0 | -1.725 | 0.60000 | 32.456 | 26.111 | 1437.9 |
| 22.0 | -1.709 | 0.60242 | 32.582 | 26.213 | 1438.2 |
| 23.0 | -1.684 | 0.60406 | 32.652 | 26.269 | 1438.4 |
| 24.0 | -1.678 | 0.60448 | 32.669 | 26.283 | 1438.5 |
| 25.0 | -1.681 | 0.60455 | 32.676 | 26.289 | 1438.5 |
| 26.0 | -1.668 | 0.60492 | 32.683 | 26.294 | 1438.6 |
| 27.0 | -1.662 | 0.60524 | 32.695 | 26.304 | 1438.7 |
| 28.0 | -1.653 | 0.60572 | 32.713 | 26.318 | 1438.7 |
| 29.0 | -1.668 | 0.60587 | 32.738 | 26.339 | 1438.7 |
| 30.0 | -1.674 | 0.60590 | 32.746 | 26.345 | 1438.7 |
| 31.0 | -1.686 | 0.60582 | 32.754 | 26.352 | 1438.7 |
| 32.0 | -1.694 | 0.60582 | 32.761 | 26.358 | 1438.7 |
| 33.0 | -1.692 | 0.60592 | 32.765 | 26.361 | 1438.7 |
| 34.0 | -1.712 | 0.60582 | 32.780 | 26.374 | 1438.7 |
| 35.0 | -1.723 | 0.60573 | 32.786 | 26.379 | 1438.6 |
| 37.5 | -1.726 | 0.60591 | 32.799 | 26.390 | 1438.7 |
| 40.0 | -1.727 | 0.60603 | 32.806 | 26.395 | 1438.7 |
| 42.5 | -1.733 | 0.60606 | 32.812 | 26.401 | 1438.7 |
| 45.0 | -1.736 | 0.60610 | 32.816 | 26.404 | 1438.8 |
| 47.5 | -1.751 | 0.60598 | 32.824 | 26.411 | 1438.7 |
| 50.0 | -1.751 | 0.60612 | 32.832 | 26.417 | 1438.8 |
| 55.0 | -1.740 | 0.60650 | 32.839 | 26.422 | 1438.9 |
| 60.0 | -1.736 | 0.60732 | 32.880 | 26.456 | 1439.1 |
| 65.0 | -1.737 | 0.60743 | 32.885 | 26.460 | 1439.2 |
| 70.0 | -1.740 | 0.60757 | 32.893 | 26.467 | 1439.3 |
| 75.0 | -1.736 | 0.60804 | 32.914 | 26.483 | 1439.4 |
| 78.7 | -1.729 | 0.60848 | 32.929 | 26.496 | 1439.5 |



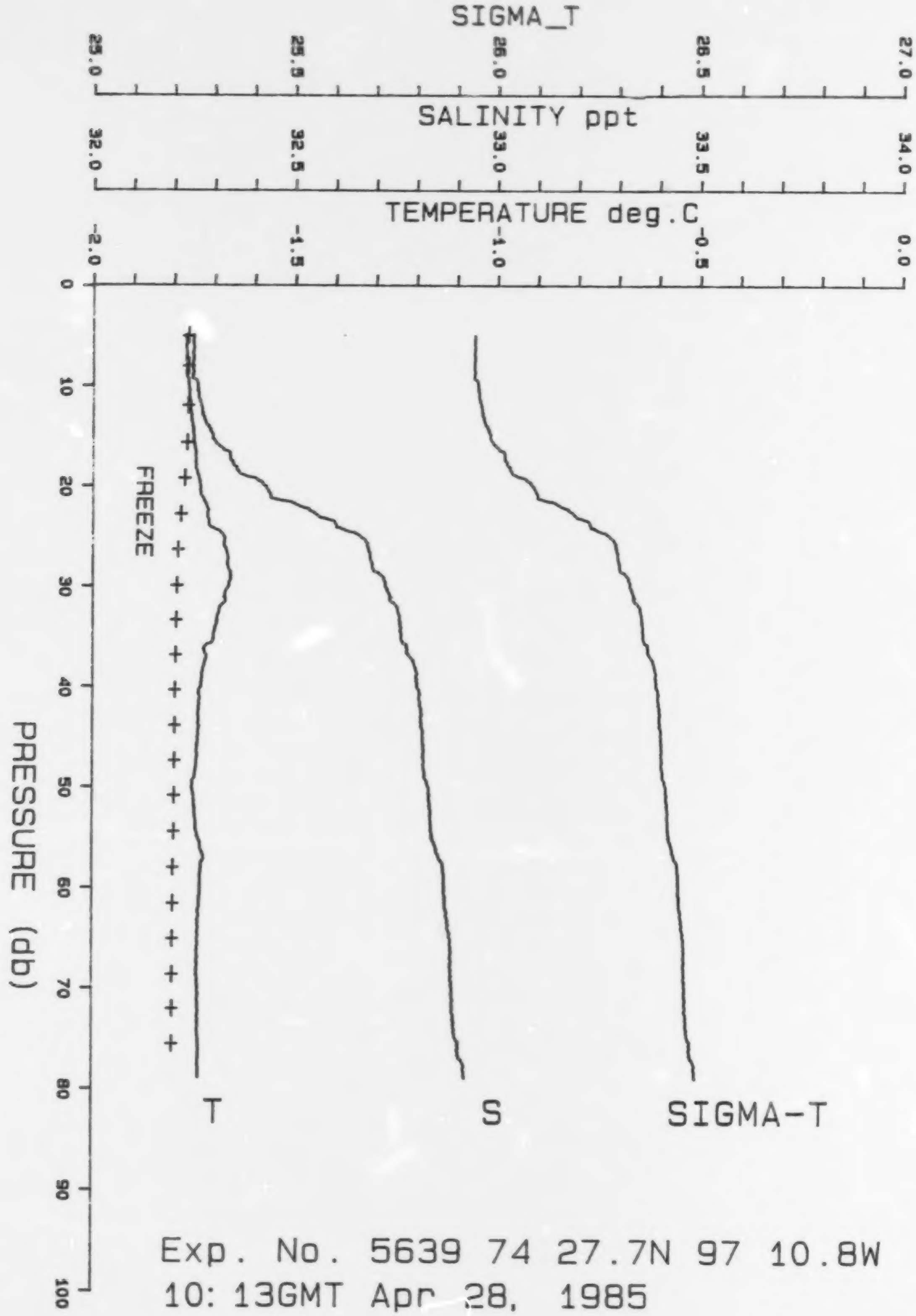
Exp. No. 5638 74 27.7N 97 10.8W
09: 49GMT Apr 28, 1985

Ice Keel '85 Experiment   Barrow Strait   Exp. No. 5639

Lat. 75 27.7N   Lon. 97 10.8W   DDMMYY 28/ 4/85

Ice Thickness 1.5m   Water Depth 114m   G.M.T. 1013

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.772 | 0.59547 | 32.248 | 25.943 | 1437.2 |
| 6.0 | -1.772 | 0.59548 | 32.248 | 25.943 | 1437.2 |
| 7.0 | -1.772 | 0.59549 | 32.248 | 25.943 | 1437.2 |
| 8.0 | -1.768 | 0.59550 | 32.244 | 25.940 | 1437.2 |
| 9.0 | -1.770 | 0.59550 | 32.245 | 25.941 | 1437.2 |
| 10.0 | -1.764 | 0.59580 | 32.256 | 25.949 | 1437.3 |
| 11.0 | -1.762 | 0.59589 | 32.259 | 25.952 | 1437.3 |
| 12.0 | -1.760 | 0.59607 | 32.266 | 25.957 | 1437.4 |
| 13.0 | -1.757 | 0.59621 | 32.271 | 25.962 | 1437.4 |
| 14.0 | -1.756 | 0.59648 | 32.285 | 25.973 | 1437.4 |
| 15.0 | -1.751 | 0.59673 | 32.294 | 25.980 | 1437.5 |
| 16.0 | -1.750 | 0.59705 | 32.311 | 25.994 | 1437.5 |
| 17.0 | -1.748 | 0.59757 | 32.339 | 26.016 | 1437.6 |
| 18.0 | -1.745 | 0.59778 | 32.349 | 26.024 | 1437.6 |
| 19.0 | -1.739 | 0.59840 | 32.378 | 26.048 | 1437.7 |
| 20.0 | -1.734 | 0.59928 | 32.424 | 26.085 | 1437.8 |
| 21.0 | -1.732 | 0.59957 | 32.438 | 26.097 | 1437.9 |
| 22.0 | -1.718 | 0.60101 | 32.509 | 26.154 | 1438.1 |
| 23.0 | -1.718 | 0.60182 | 32.556 | 26.192 | 1438.1 |
| 24.0 | -1.713 | 0.60269 | 32.601 | 26.229 | 1438.2 |
| 25.0 | -1.676 | 0.60437 | 32.660 | 26.276 | 1438.5 |
| 26.0 | -1.675 | 0.60469 | 32.677 | 26.290 | 1438.6 |
| 27.0 | -1.667 | 0.60497 | 32.684 | 26.295 | 1438.6 |
| 28.0 | -1.666 | 0.60506 | 32.689 | 26.299 | 1438.6 |
| 29.0 | -1.661 | 0.60563 | 32.715 | 26.320 | 1438.7 |
| 30.0 | -1.664 | 0.60566 | 32.721 | 26.325 | 1438.7 |
| 31.0 | -1.674 | 0.60568 | 32.732 | 26.334 | 1438.7 |
| 32.0 | -1.688 | 0.60576 | 32.751 | 26.350 | 1438.7 |
| 33.0 | -1.693 | 0.60576 | 32.757 | 26.355 | 1438.7 |
| 34.0 | -1.697 | 0.60571 | 32.757 | 26.355 | 1438.7 |
| 35.0 | -1.703 | 0.60566 | 32.761 | 26.358 | 1438.7 |
| 37.5 | -1.723 | 0.60581 | 32.790 | 26.382 | 1438.7 |
| 40.0 | -1.732 | 0.60581 | 32.798 | 26.389 | 1438.7 |
| 42.5 | -1.739 | 0.60589 | 32.809 | 26.398 | 1438.7 |
| 45.0 | -1.742 | 0.60596 | 32.815 | 26.403 | 1438.7 |
| 47.5 | -1.745 | 0.60594 | 32.816 | 26.404 | 1438.8 |
| 50.0 | -1.755 | 0.60600 | 32.829 | 26.415 | 1438.8 |
| 55.0 | -1.740 | 0.60649 | 32.838 | 26.422 | 1438.9 |
| 60.0 | -1.732 | 0.60716 | 32.866 | 26.444 | 1439.1 |
| 65.0 | -1.740 | 0.60734 | 32.883 | 26.459 | 1439.2 |
| 70.0 | -1.739 | 0.60750 | 32.888 | 26.462 | 1439.2 |
| 75.0 | -1.737 | 0.60776 | 32.898 | 26.470 | 1439.4 |
| 78.9 | -1.736 | 0.60815 | 32.918 | 26.486 | 1439.4 |



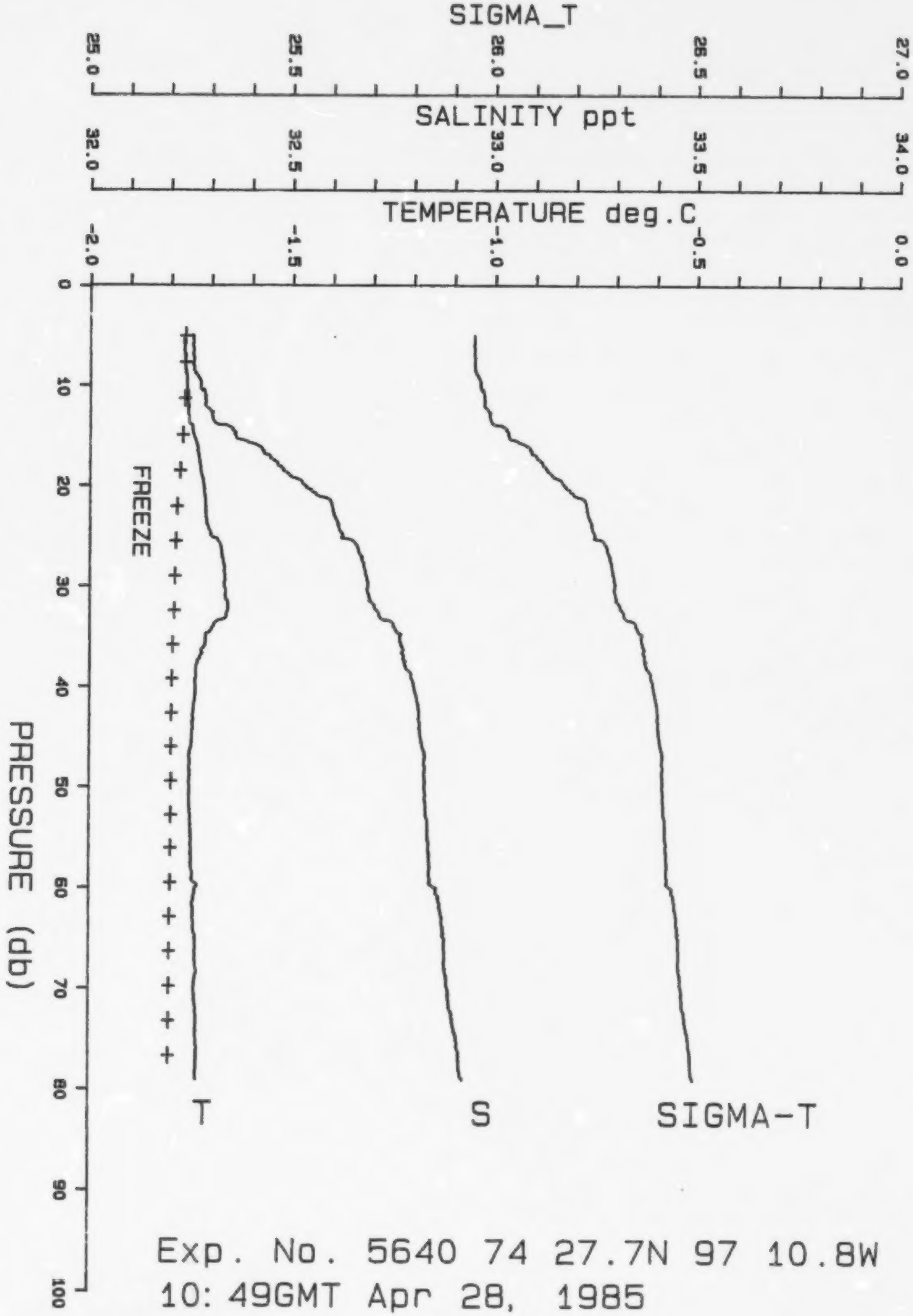
Exp. No. 5639 74 27.7N 97 10.8W
10: 13GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5640

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1049

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | −1.769 | 0.59561 | 32.253 | 25.947 | 1437.2 |
| 6.0 | −1.767 | 0.59560 | 32.250 | 25.945 | 1437.2 |
| 7.0 | −1.767 | 0.59565 | 32.253 | 25.946 | 1437.2 |
| 8.0 | −1.767 | 0.59569 | 32.254 | 25.948 | 1437.3 |
| 9.0 | −1.763 | 0.59593 | 32.263 | 25.955 | 1437.3 |
| 10.0 | −1.762 | 0.59609 | 32.272 | 25.962 | 1437.3 |
| 11.0 | −1.759 | 0.59632 | 32.281 | 25.969 | 1437.4 |
| 12.0 | −1.758 | 0.59637 | 32.283 | 25.971 | 1437.4 |
| 13.0 | −1.757 | 0.59669 | 32.299 | 25.984 | 1437.4 |
| 14.0 | −1.750 | 0.59748 | 32.338 | 26.015 | 1437.5 |
| 15.0 | −1.744 | 0.59796 | 32.359 | 26.033 | 1437.6 |
| 16.0 | −1.734 | 0.59905 | 32.414 | 26.077 | 1437.8 |
| 17.0 | −1.731 | 0.59960 | 32.442 | 26.099 | 1437.8 |
| 18.0 | −1.727 | 0.60005 | 32.464 | 26.117 | 1437.9 |
| 19.0 | −1.725 | 0.60059 | 32.493 | 26.141 | 1438.0 |
| 20.0 | −1.720 | 0.60134 | 32.531 | 26.172 | 1438.0 |
| 21.0 | −1.717 | 0.60192 | 32.562 | 26.197 | 1438.1 |
| 22.0 | −1.716 | 0.60253 | 32.596 | 26.225 | 1438.2 |
| 23.0 | −1.715 | 0.60266 | 32.602 | 26.230 | 1438.2 |
| 24.0 | −1.710 | 0.60293 | 32.613 | 26.238 | 1438.3 |
| 25.0 | −1.700 | 0.60327 | 32.620 | 26.244 | 1438.3 |
| 26.0 | −1.676 | 0.60434 | 32.658 | 26.274 | 1438.5 |
| 27.0 | −1.675 | 0.60459 | 32.671 | 26.285 | 1438.6 |
| 28.0 | −1.668 | 0.60479 | 32.675 | 26.287 | 1438.6 |
| 29.0 | −1.669 | 0.60492 | 32.683 | 26.294 | 1438.6 |
| 30.0 | −1.669 | 0.60497 | 32.685 | 26.296 | 1438.7 |
| 31.0 | −1.666 | 0.60508 | 32.687 | 26.298 | 1438.7 |
| 32.0 | −1.661 | 0.60541 | 32.701 | 26.309 | 1438.8 |
| 33.0 | −1.665 | 0.60557 | 32.714 | 26.319 | 1438.8 |
| 34.0 | −1.697 | 0.60556 | 32.748 | 26.348 | 1438.7 |
| 35.0 | −1.715 | 0.60550 | 32.764 | 26.361 | 1438.6 |
| 37.5 | −1.734 | 0.60533 | 32.773 | 26.369 | 1438.6 |
| 40.0 | −1.740 | 0.60569 | 32.800 | 26.390 | 1438.6 |
| 42.5 | −1.745 | 0.60581 | 32.811 | 26.400 | 1438.7 |
| 45.0 | −1.748 | 0.60588 | 32.817 | 26.404 | 1438.7 |
| 47.5 | −1.753 | 0.60593 | 32.824 | 26.411 | 1438.7 |
| 50.0 | −1.754 | 0.60597 | 32.826 | 26.412 | 1438.8 |
| 55.0 | −1.749 | 0.60624 | 32.833 | 26.418 | 1438.9 |
| 60.0 | −1.740 | 0.60685 | 32.857 | 26.437 | 1439.0 |
| 65.0 | −1.740 | 0.60725 | 32.878 | 26.454 | 1439.1 |
| 70.0 | −1.741 | 0.60741 | 32.885 | 26.460 | 1439.2 |
| 75.0 | −1.735 | 0.60792 | 32.905 | 26.476 | 1439.4 |
| 79.0 | −1.735 | 0.60824 | 32.922 | 26.490 | 1439.5 |



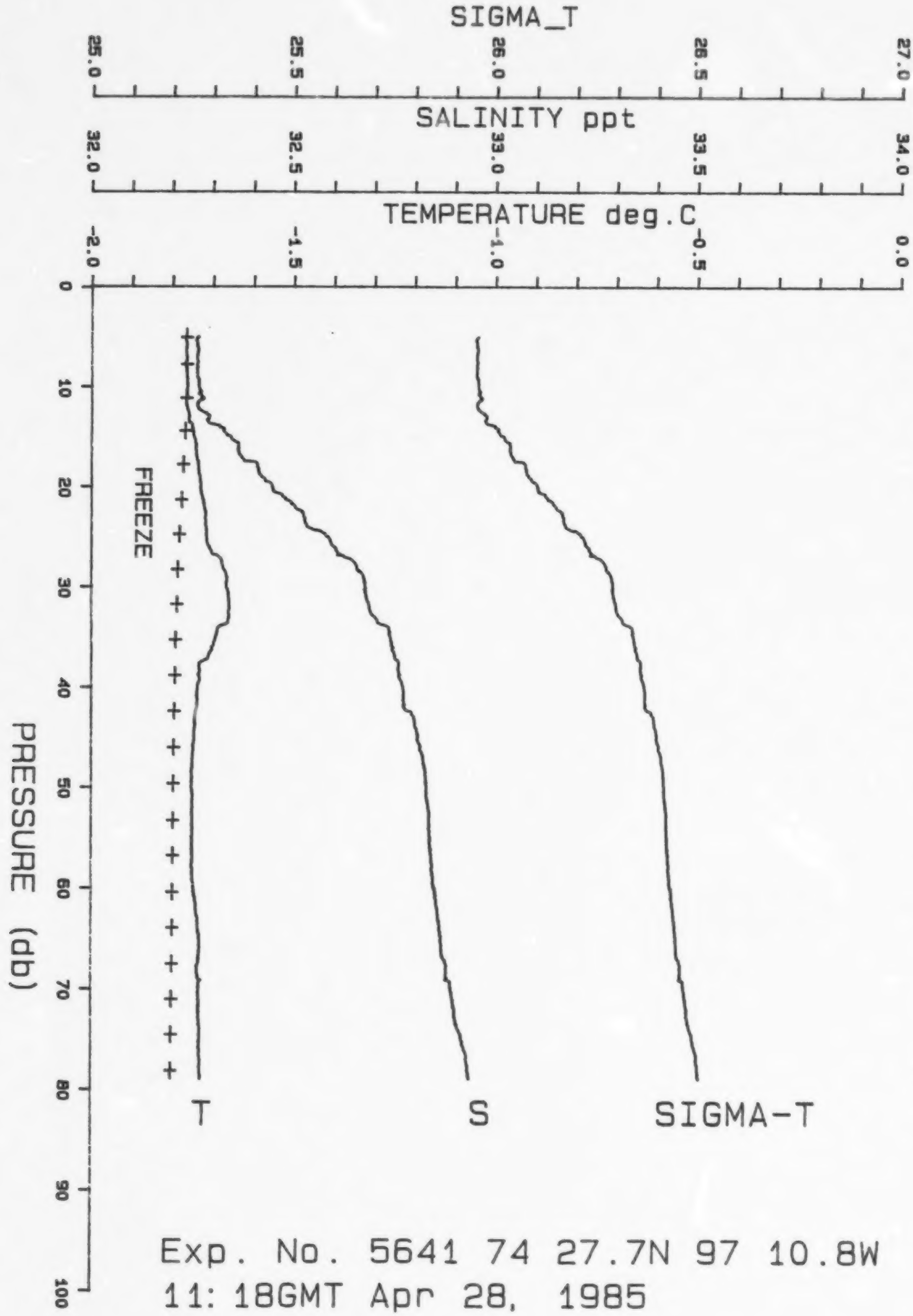
Exp. No. 5640 74 27.7N 97 10.8W
10: 49GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5641

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1118

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.769 | 0.59578 | 32.264 | 25.955 | 1437.2 |
| 6.0 | -1.767 | 0.59574 | 32.258 | 25.951 | 1437.2 |
| 7.0 | -1.766 | 0.59577 | 32.258 | 25.951 | 1437.2 |
| 8.0 | -1.767 | 0.59579 | 32.260 | 25.953 | 1437.3 |
| 9.0 | -1.765 | 0.59581 | 32.258 | 25.951 | 1437.3 |
| 10.0 | -1.764 | 0.59592 | 32.264 | 25.955 | 1437.3 |
| 11.0 | -1.764 | 0.59608 | 32.272 | 25.962 | 1437.3 |
| 12.0 | -1.765 | 0.59589 | 32.261 | 25.953 | 1437.3 |
| 13.0 | -1.761 | 0.59645 | 32.289 | 25.976 | 1437.4 |
| 14.0 | -1.752 | 0.59703 | 32.314 | 25.996 | 1437.5 |
| 15.0 | -1.747 | 0.59763 | 32.343 | 26.020 | 1437.6 |
| 16.0 | -1.743 | 0.59802 | 32.362 | 26.035 | 1437.6 |
| 17.0 | -1.743 | 0.59819 | 32.370 | 26.042 | 1437.7 |
| 18.0 | -1.736 | 0.59892 | 32.407 | 26.071 | 1437.8 |
| 19.0 | -1.733 | 0.59920 | 32.419 | 26.081 | 1437.8 |
| 20.0 | -1.731 | 0.59968 | 32.445 | 26.102 | 1437.9 |
| 21.0 | -1.727 | 0.60024 | 32.473 | 26.125 | 1438.0 |
| 22.0 | -1.723 | 0.60080 | 32.502 | 26.148 | 1438.0 |
| 23.0 | -1.720 | 0.60125 | 32.525 | 26.167 | 1438.1 |
| 24.0 | -1.718 | 0.60146 | 32.533 | 26.174 | 1438.1 |
| 25.0 | -1.717 | 0.60236 | 32.585 | 26.216 | 1438.2 |
| 26.0 | -1.709 | 0.60278 | 32.601 | 26.229 | 1438.3 |
| 27.0 | -1.686 | 0.60367 | 32.627 | 26.249 | 1438.5 |
| 28.0 | -1.677 | 0.60430 | 32.655 | 26.272 | 1438.6 |
| 29.0 | -1.666 | 0.60479 | 32.671 | 26.284 | 1438.6 |
| 30.0 | -1.669 | 0.60486 | 32.678 | 26.290 | 1438.7 |
| 31.0 | -1.664 | 0.60500 | 32.681 | 26.293 | 1438.7 |
| 32.0 | -1.661 | 0.60516 | 32.686 | 26.296 | 1438.7 |
| 33.0 | -1.663 | 0.60541 | 32.702 | 26.310 | 1438.8 |
| 34.0 | -1.690 | 0.60550 | 32.737 | 26.338 | 1438.7 |
| 35.0 | -1.696 | 0.60545 | 32.740 | 26.341 | 1438.7 |
| 37.5 | -1.732 | 0.60511 | 32.759 | 26.357 | 1438.6 |
| 40.0 | -1.739 | 0.60522 | 32.771 | 26.367 | 1438.6 |
| 42.5 | -1.745 | 0.60550 | 32.793 | 26.385 | 1438.6 |
| 45.0 | -1.747 | 0.60573 | 32.806 | 26.396 | 1438.7 |
| 47.5 | -1.752 | 0.60592 | 32.822 | 26.409 | 1438.7 |
| 50.0 | -1.755 | 0.60603 | 32.830 | 26.416 | 1438.8 |
| 55.0 | -1.752 | 0.60626 | 32.838 | 26.422 | 1438.9 |
| 60.0 | -1.750 | 0.60658 | 32.852 | 26.433 | 1439.0 |
| 65.0 | -1.735 | 0.60716 | 32.866 | 26.445 | 1439.2 |
| 70.0 | -1.735 | 0.60759 | 32.889 | 26.463 | 1439.3 |
| 75.0 | -1.734 | 0.60811 | 32.916 | 26.485 | 1439.4 |
| 78.9 | -1.731 | 0.60850 | 32.933 | 26.499 | 1439.5 |



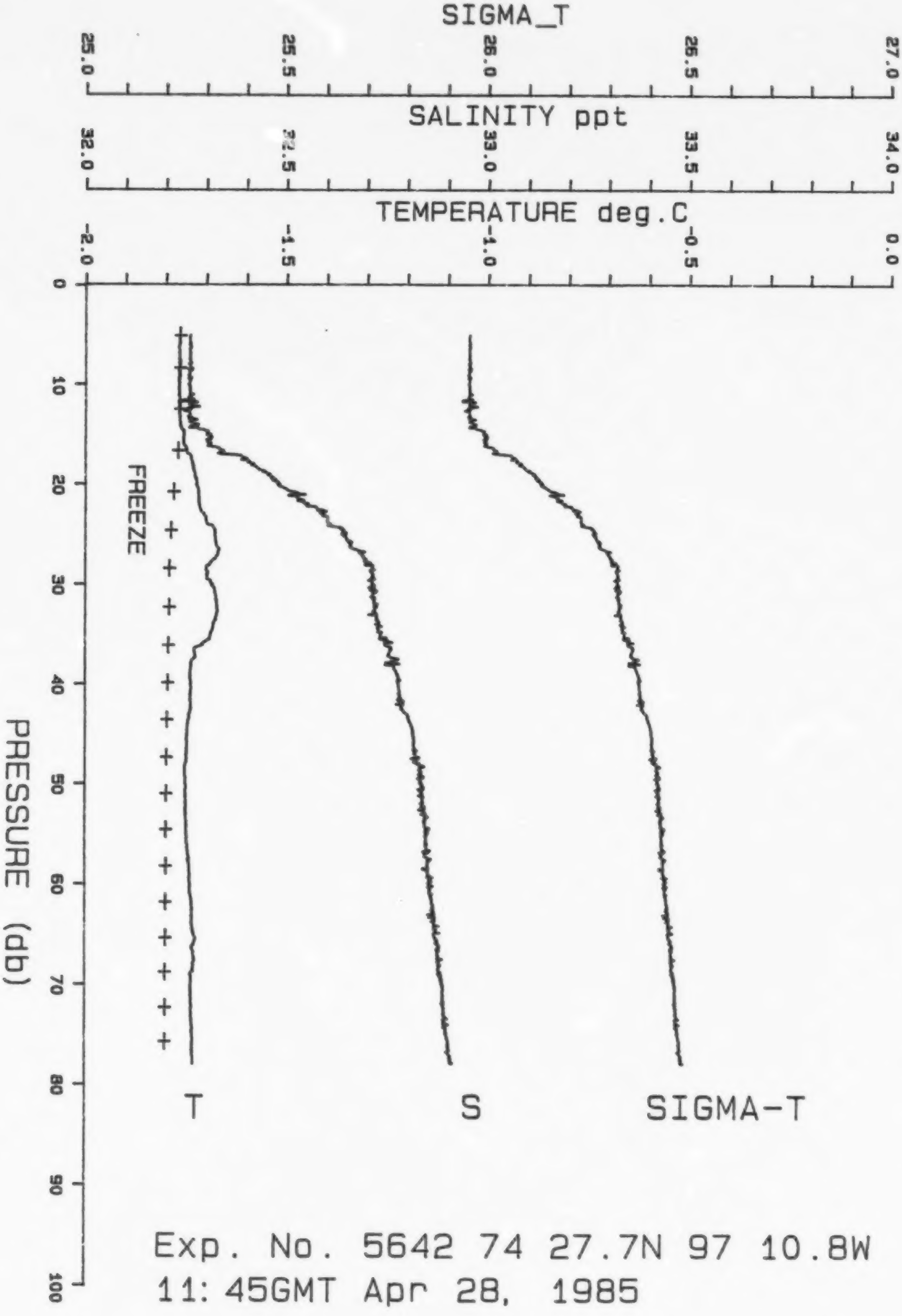
Exp. No. 5641 74 27.7N 97 10.8W
11:18GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5642

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1145

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.770 | 0.59573 | 32.260 | 25.952 | 1437.2 |
| 6.0 | -1.768 | 0.59570 | 32.257 | 25.950 | 1437.2 |
| 7.0 | -1.768 | 0.59572 | 32.257 | 25.950 | 1437.2 |
| 8.0 | -1.767 | 0.59571 | 32.256 | 25.949 | 1437.3 |
| 9.0 | -1.769 | 0.59571 | 32.256 | 25.950 | 1437.3 |
| 10.0 | -1.769 | 0.59570 | 32.255 | 25.949 | 1437.3 |
| 11.0 | -1.771 | 0.59583 | 32.264 | 25.956 | 1437.3 |
| 12.0 | -1.768 | 0.59573 | 32.255 | 25.948 | 1437.3 |
| 13.0 | -1.767 | 0.59581 | 32.258 | 25.951 | 1437.3 |
| 14.0 | -1.768 | 0.59615 | 32.278 | 25.967 | 1437.4 |
| 15.0 | -1.757 | 0.59689 | 32.310 | 25.993 | 1437.5 |
| 16.0 | -1.756 | 0.59685 | 32.306 | 25.990 | 1437.5 |
| 17.0 | -1.742 | 0.59773 | 32.342 | 26.019 | 1437.6 |
| 18.0 | -1.735 | 0.59906 | 32.413 | 26.076 | 1437.8 |
| 19.0 | -1.729 | 0.59992 | 32.457 | 26.112 | 1437.9 |
| 20.0 | -1.728 | 0.60038 | 32.482 | 26.132 | 1437.9 |
| 21.0 | -1.720 | 0.60121 | 32.523 | 26.165 | 1438.1 |
| 22.0 | -1.718 | 0.60159 | 32.543 | 26.181 | 1438.1 |
| 23.0 | -1.706 | 0.60259 | 32.589 | 26.219 | 1438.2 |
| 24.0 | -1.697 | 0.60307 | 32.606 | 26.233 | 1438.3 |
| 25.0 | -1.679 | 0.60389 | 32.634 | 26.255 | 1438.5 |
| 26.0 | -1.677 | 0.60430 | 32.656 | 26.273 | 1438.5 |
| 27.0 | -1.672 | 0.60486 | 32.684 | 26.295 | 1438.6 |
| 28.0 | -1.694 | 0.60474 | 32.699 | 26.308 | 1438.5 |
| 29.0 | -1.699 | 0.60487 | 32.713 | 26.319 | 1438.5 |
| 30.0 | -1.684 | 0.60506 | 32.707 | 26.314 | 1438.6 |
| 31.0 | -1.678 | 0.60526 | 32.712 | 26.318 | 1438.7 |
| 32.0 | -1.676 | 0.60548 | 32.721 | 26.326 | 1438.7 |
| 33.0 | -1.675 | 0.60537 | 32.713 | 26.319 | 1438.7 |
| 34.0 | -1.683 | 0.60537 | 32.721 | 26.326 | 1438.7 |
| 35.0 | -1.691 | 0.60537 | 32.730 | 26.333 | 1438.7 |
| 37.5 | -1.733 | 0.60534 | 32.773 | 26.369 | 1438.6 |
| 40.0 | -1.739 | 0.60532 | 32.777 | 26.372 | 1438.6 |
| 42.5 | -1.738 | 0.60547 | 32.783 | 26.377 | 1438.7 |
| 45.0 | -1.747 | 0.60579 | 32.811 | 26.400 | 1438.7 |
| 47.5 | -1.750 | 0.60600 | 32.825 | 26.411 | 1438.7 |
| 50.0 | -1.753 | 0.60616 | 32.837 | 26.421 | 1438.8 |
| 55.0 | -1.749 | 0.60645 | 32.846 | 26.428 | 1438.9 |
| 60.0 | -1.740 | 0.60678 | 32.852 | 26.433 | 1439.0 |
| 65.0 | -1.732 | 0.60720 | 32.865 | 26.443 | 1439.2 |
| 70.0 | -1.739 | 0.60746 | 32.886 | 26.460 | 1439.2 |
| 75.0 | -1.735 | 0.60776 | 32.895 | 26.468 | 1439.4 |
| 77.9 | -1.735 | 0.60797 | 32.907 | 26.477 | 1439.4 |



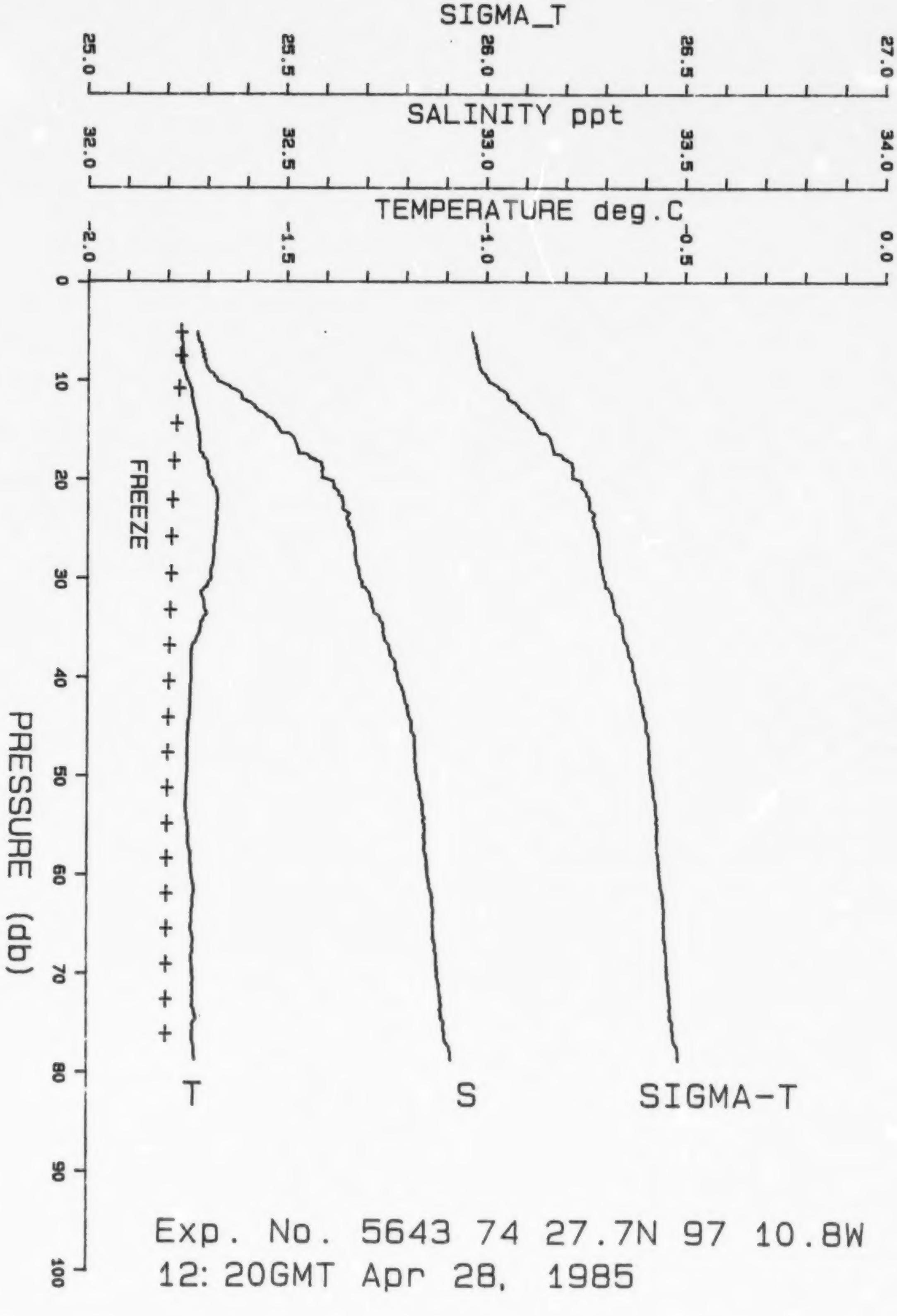
Exp. No. 5642 74 27.7N 97 10.8W
11: 45GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5643

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1220

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.1 | -1.766 | 0.59600 | 32.273 | 25.963 | 1437.2 |
| 6.0 | -1.766 | 0.59608 | 32.278 | 25.967 | 1437.3 |
| 7.0 | -1.763 | 0.59630 | 32.287 | 25.974 | 1437.3 |
| 8.0 | -1.763 | 0.59645 | 32.295 | 25.981 | 1437.3 |
| 9.0 | -1.759 | 0.59667 | 32.303 | 25.988 | 1437.4 |
| 10.0 | -1.752 | 0.59717 | 32.324 | 26.004 | 1437.5 |
| 11.0 | -1.742 | 0.59817 | 32.373 | 26.044 | 1437.6 |
| 12.0 | -1.737 | 0.59869 | 32.398 | 26.064 | 1437.7 |
| 13.0 | -1.731 | 0.59928 | 32.425 | 26.086 | 1437.7 |
| 14.0 | -1.727 | 0.60005 | 32.466 | 26.119 | 1437.8 |
| 15.0 | -1.725 | 0.60036 | 32.482 | 26.132 | 1437.9 |
| 16.0 | -1.720 | 0.60109 | 32.518 | 26.161 | 1438.0 |
| 17.0 | -1.719 | 0.60126 | 32.528 | 26.169 | 1438.0 |
| 18.0 | -1.703 | 0.60226 | 32.568 | 26.202 | 1438.1 |
| 19.0 | -1.699 | 0.60268 | 32.588 | 26.218 | 1438.2 |
| 20.0 | -1.687 | 0.60325 | 32.609 | 26.234 | 1438.3 |
| 21.0 | -1.677 | 0.60372 | 32.626 | 26.248 | 1438.4 |
| 22.0 | -1.675 | 0.60399 | 32.638 | 26.258 | 1438.4 |
| 23.0 | -1.674 | 0.60408 | 32.642 | 26.261 | 1438.5 |
| 24.0 | -1.676 | 0.60420 | 32.651 | 26.268 | 1438.5 |
| 25.0 | -1.678 | 0.60436 | 32.662 | 26.278 | 1438.5 |
| 26.0 | -1.680 | 0.60443 | 32.668 | 26.282 | 1438.5 |
| 27.0 | -1.685 | 0.60444 | 32.672 | 26.286 | 1438.5 |
| 28.0 | -1.686 | 0.60445 | 32.674 | 26.287 | 1438.5 |
| 29.0 | -1.691 | 0.60449 | 32.681 | 26.293 | 1438.5 |
| 30.0 | -1.691 | 0.60457 | 32.686 | 26.297 | 1438.6 |
| 31.0 | -1.710 | 0.60449 | 32.700 | 26.309 | 1438.5 |
| 32.0 | -1.711 | 0.60468 | 32.713 | 26.319 | 1438.5 |
| 33.0 | -1.707 | 0.60483 | 32.716 | 26.322 | 1438.6 |
| 34.0 | -1.712 | 0.60506 | 32.735 | 26.337 | 1438.6 |
| 35.0 | -1.720 | 0.60507 | 32.744 | 26.345 | 1438.6 |
| 37.5 | -1.741 | 0.60499 | 32.762 | 26.360 | 1438.5 |
| 40.0 | -1.739 | 0.60536 | 32.780 | 26.374 | 1438.6 |
| 42.5 | -1.743 | 0.60564 | 32.799 | 26.390 | 1438.7 |
| 45.0 | -1.747 | 0.60584 | 32.814 | 26.402 | 1438.7 |
| 47.5 | -1.749 | 0.60597 | 32.822 | 26.409 | 1438.7 |
| 50.0 | -1.749 | 0.60607 | 32.827 | 26.413 | 1438.8 |
| 55.0 | -1.748 | 0.60650 | 32.847 | 26.430 | 1438.9 |
| 60.0 | -1.739 | 0.60686 | 32.856 | 26.436 | 1439.0 |
| 65.0 | -1.741 | 0.60709 | 32.869 | 26.447 | 1439.1 |
| 70.0 | -1.735 | 0.60741 | 32.879 | 26.455 | 1439.3 |
| 75.0 | -1.734 | 0.60772 | 32.893 | 26.466 | 1439.4 |
| 78.7 | -1.729 | 0.60820 | 32.913 | 26.482 | 1439.5 |



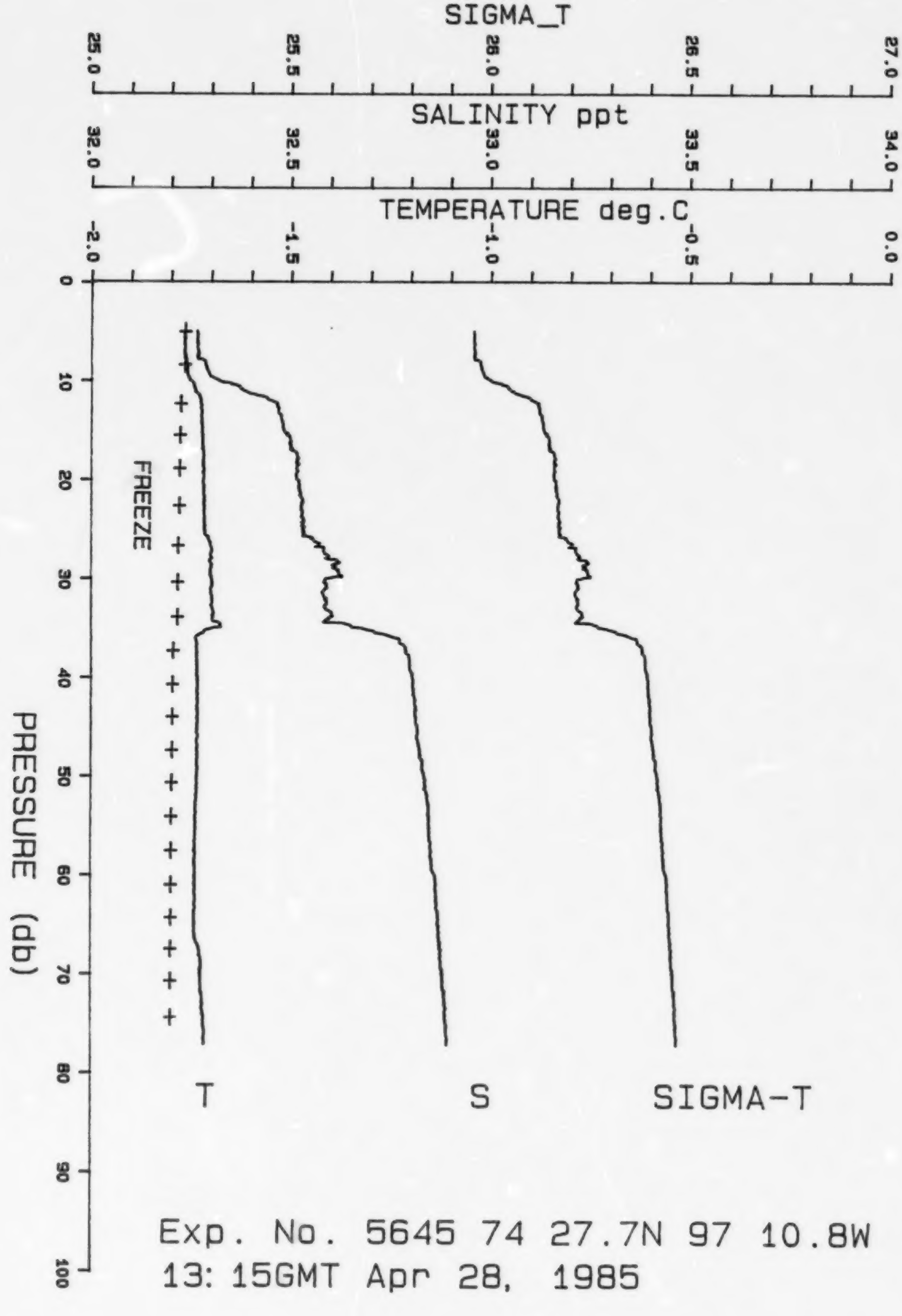
Exp. No. 5643 74 27.7N 97 10.8W
12: 20GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5645

Lat.  75 27.7N    Lon.  97 10.8W    DDMMYY  28/ 4/85

Ice Thickness  1.5m    Water Depth  114m    G.M.T.  1315

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.769 | 0.59580 | 32.264 | 25.956 | 1437.2 |
| 6.0 | -1.770 | 0.59580 | 32.265 | 25.957 | 1437.2 |
| 7.0 | -1.768 | 0.59586 | 32.266 | 25.957 | 1437.2 |
| 8.0 | -1.764 | 0.59625 | 32.284 | 25.972 | 1437.3 |
| 9.0 | -1.761 | 0.59641 | 32.290 | 25.977 | 1437.3 |
| 10.0 | -1.752 | 0.59709 | 32.319 | 26.000 | 1437.4 |
| 11.0 | -1.740 | 0.59837 | 32.382 | 26.051 | 1437.6 |
| 12.0 | -1.727 | 0.59977 | 32.450 | 26.106 | 1437.8 |
| 13.0 | -1.725 | 0.60007 | 32.466 | 26.119 | 1437.8 |
| 14.0 | -1.725 | 0.60025 | 32.475 | 26.127 | 1437.9 |
| 15.0 | -1.724 | 0.60036 | 32.481 | 26.131 | 1437.9 |
| 16.0 | -1.724 | 0.60066 | 32.497 | 26.144 | 1437.9 |
| 17.0 | -1.721 | 0.60073 | 32.498 | 26.145 | 1437.9 |
| 18.0 | -1.721 | 0.60097 | 32.512 | 26.156 | 1438.0 |
| 19.0 | -1.719 | 0.60105 | 32.514 | 26.158 | 1438.0 |
| 20.0 | -1.721 | 0.60107 | 32.517 | 26.160 | 1438.0 |
| 21.0 | -1.720 | 0.60114 | 32.519 | 26.162 | 1438.0 |
| 22.0 | -1.719 | 0.60132 | 32.528 | 26.170 | 1438.1 |
| 23.0 | -1.718 | 0.60127 | 32.523 | 26.165 | 1438.1 |
| 24.0 | -1.719 | 0.60136 | 32.530 | 26.171 | 1438.1 |
| 25.0 | -1.718 | 0.60135 | 32.527 | 26.168 | 1438.1 |
| 26.0 | -1.708 | 0.60199 | 32.554 | 26.190 | 1438.2 |
| 27.0 | -1.700 | 0.60260 | 32.580 | 26.211 | 1438.3 |
| 28.0 | -1.703 | 0.60276 | 32.592 | 26.221 | 1438.3 |
| 29.0 | -1.704 | 0.60306 | 32.611 | 26.236 | 1438.4 |
| 30.0 | -1.700 | 0.60269 | 32.584 | 26.214 | 1438.4 |
| 31.0 | -1.703 | 0.60263 | 32.582 | 26.213 | 1438.4 |
| 32.0 | -1.700 | 0.60279 | 32.588 | 26.218 | 1438.4 |
| 33.0 | -1.699 | 0.60281 | 32.587 | 26.217 | 1438.4 |
| 34.0 | -1.698 | 0.60292 | 32.593 | 26.222 | 1438.5 |
| 35.0 | -1.699 | 0.60437 | 32.679 | 26.291 | 1438.6 |
| 37.5 | -1.737 | 0.60553 | 32.788 | 26.381 | 1438.6 |
| 40.0 | -1.735 | 0.60584 | 32.803 | 26.393 | 1438.7 |
| 42.5 | -1.734 | 0.60597 | 32.809 | 26.398 | 1438.7 |
| 45.0 | -1.735 | 0.60608 | 32.814 | 26.402 | 1438.8 |
| 47.5 | -1.735 | 0.60620 | 32.820 | 26.407 | 1438.8 |
| 50.0 | -1.737 | 0.60641 | 32.834 | 26.418 | 1438.9 |
| 55.0 | -1.740 | 0.60661 | 32.845 | 26.428 | 1438.9 |
| 60.0 | -1.741 | 0.60688 | 32.859 | 26.439 | 1439.0 |
| 65.0 | -1.742 | 0.60704 | 32.867 | 26.445 | 1439.1 |
| 70.0 | -1.727 | 0.60757 | 32.878 | 26.454 | 1439.3 |
| 75.0 | -1.720 | 0.60791 | 32.888 | 26.462 | 1439.4 |
| 77.1 | -1.719 | 0.60800 | 32.890 | 26.464 | 1439.5 |



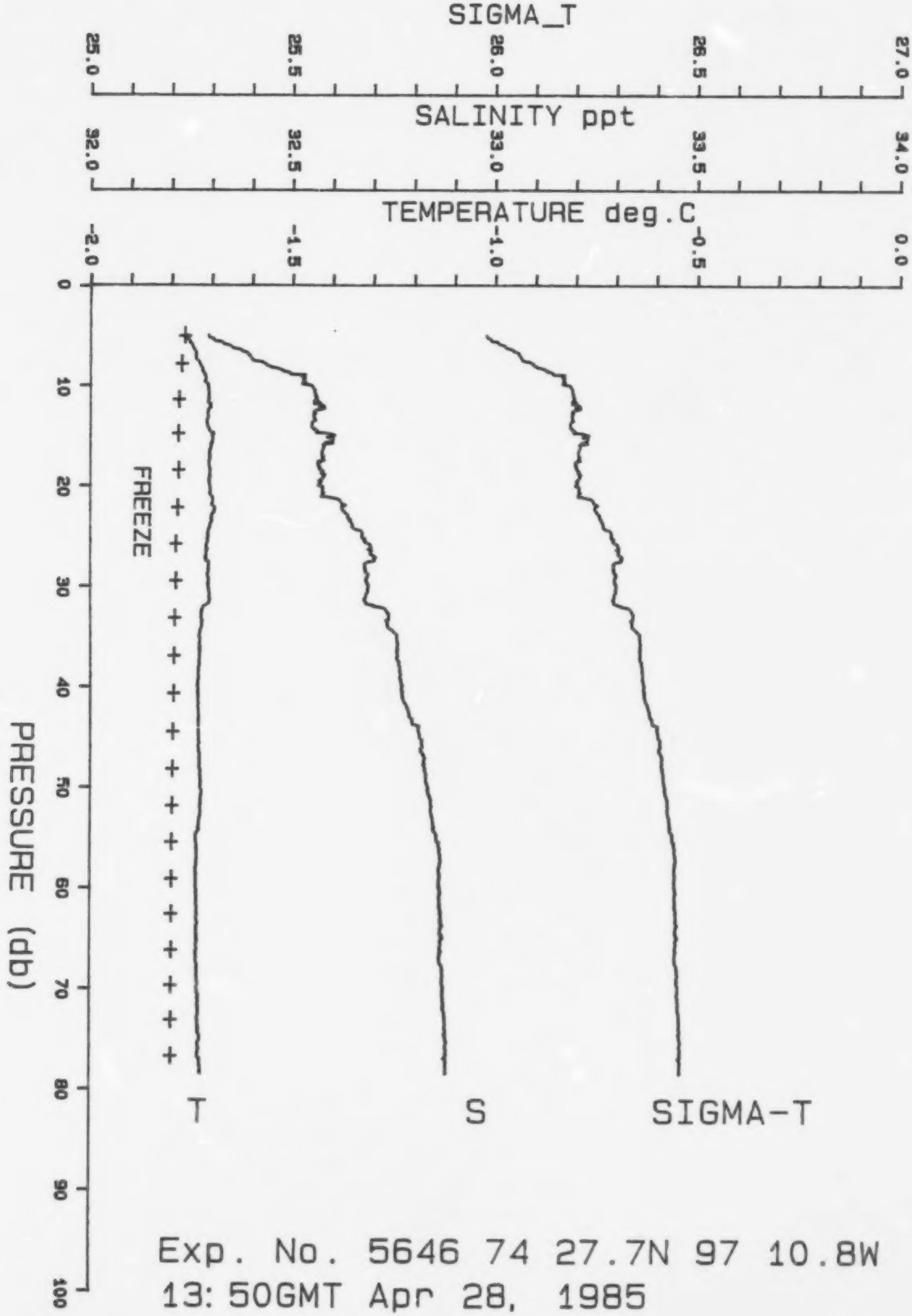
Exp. No. 5645 74 27.7N 97 10.8W
13: 15GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5646

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1350

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.766 | 0.59628 | 32.290 | 25.977 | 1437.3 |
| 6.0 | -1.750 | 0.59751 | 32.344 | 26.021 | 1437.4 |
| 7.0 | -1.741 | 0.59848 | 32.392 | 26.059 | 1437.5 |
| 8.0 | -1.729 | 0.59946 | 32.437 | 26.095 | 1437.7 |
| 9.0 | -1.718 | 0.60112 | 32.523 | 26.165 | 1437.9 |
| 10.0 | -1.710 | 0.60165 | 32.545 | 26.183 | 1438.0 |
| 11.0 | -1.710 | 0.60180 | 32.554 | 26.190 | 1438.0 |
| 12.0 | -1.706 | 0.60224 | 32.575 | 26.207 | 1438.0 |
| 13.0 | -1.711 | 0.60172 | 32.548 | 26.185 | 1438.0 |
| 14.0 | -1.714 | 0.60163 | 32.546 | 26.184 | 1438.0 |
| 15.0 | -1.703 | 0.60270 | 32.596 | 26.224 | 1438.1 |
| 16.0 | -1.705 | 0.60234 | 32.576 | 26.208 | 1438.1 |
| 17.0 | -1.706 | 0.60223 | 32.571 | 26.204 | 1438.1 |
| 18.0 | -1.707 | 0.60204 | 32.560 | 26.195 | 1438.1 |
| 19.0 | -1.705 | 0.60231 | 32.573 | 26.206 | 1438.2 |
| 20.0 | -1.706 | 0.60219 | 32.566 | 26.200 | 1438.2 |
| 21.0 | -1.702 | 0.60229 | 32.568 | 26.201 | 1438.2 |
| 22.0 | -1.699 | 0.60326 | 32.621 | 26.245 | 1438.3 |
| 23.0 | -1.704 | 0.60341 | 32.635 | 26.256 | 1438.3 |
| 24.0 | -1.707 | 0.60351 | 32.644 | 26.263 | 1438.3 |
| 25.0 | -1.710 | 0.60388 | 32.668 | 26.283 | 1438.4 |
| 26.0 | -1.714 | 0.60418 | 32.690 | 26.301 | 1438.4 |
| 27.0 | -1.719 | 0.60429 | 32.701 | 26.310 | 1438.4 |
| 28.0 | -1.709 | 0.60406 | 32.676 | 26.289 | 1438.4 |
| 29.0 | -1.711 | 0.60413 | 32.681 | 26.294 | 1438.4 |
| 30.0 | -1.711 | 0.60421 | 32.685 | 26.297 | 1438.5 |
| 31.0 | -1.709 | 0.60415 | 32.679 | 26.292 | 1438.5 |
| 32.0 | -1.723 | 0.60436 | 32.707 | 26.315 | 1438.5 |
| 33.0 | -1.729 | 0.60475 | 32.736 | 26.338 | 1438.5 |
| 34.0 | -1.726 | 0.60475 | 32.733 | 26.336 | 1438.5 |
| 35.0 | -1.733 | 0.60504 | 32.756 | 26.355 | 1438.5 |
| 37.5 | -1.733 | 0.60517 | 32.762 | 26.360 | 1438.6 |
| 40.0 | -1.735 | 0.60526 | 32.769 | 26.366 | 1438.6 |
| 42.5 | -1.734 | 0.60560 | 32.786 | 26.379 | 1438.7 |
| 45.0 | -1.733 | 0.60609 | 32.813 | 26.401 | 1438.8 |
| 47.5 | -1.731 | 0.60632 | 32.823 | 26.410 | 1438.8 |
| 50.0 | -1.731 | 0.60654 | 32.834 | 26.418 | 1438.9 |
| 55.0 | -1.740 | 0.60676 | 32.854 | 26.435 | 1439.0 |
| 60.0 | -1.740 | 0.60696 | 32.864 | 26.443 | 1439.0 |
| 65.0 | -1.739 | 0.60716 | 32.871 | 26.448 | 1439.1 |
| 70.0 | -1.737 | 0.60725 | 32.871 | 26.448 | 1439.2 |
| 75.0 | -1.729 | 0.60752 | 32.875 | 26.452 | 1439.4 |
| 78.4 | -1.727 | 0.60761 | 32.876 | 26.452 | 1439.4 |



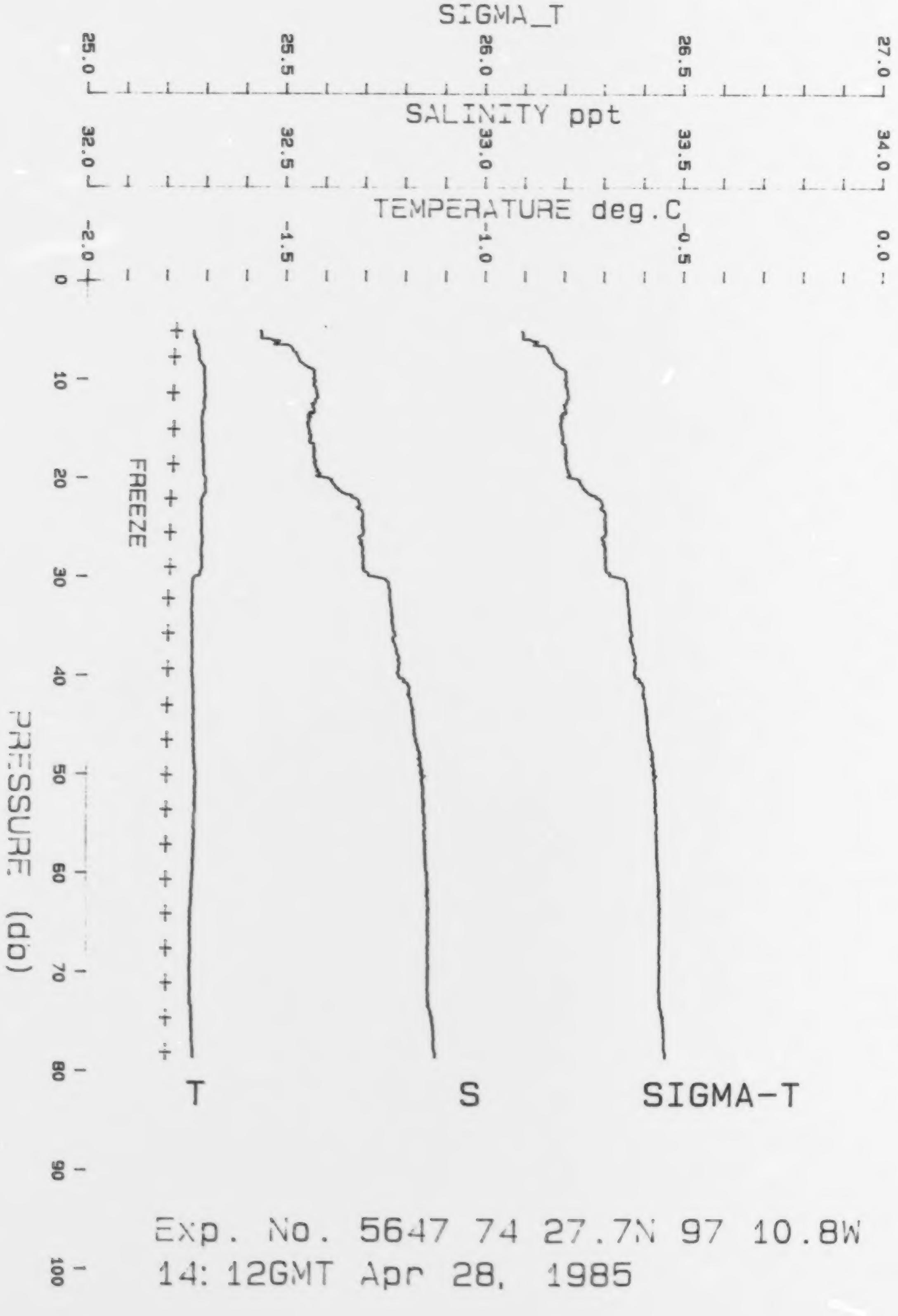
Exp. No. 5646 74 27.7N 97 10.8W
13: 50GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5647

Lat.  75 27.7N    Lon.  97 10.8W    DDMMYY  28/ 4/85

Ice Thickness  1.5m    Water Depth  114m    G.M.T.  1412

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.1 | -1.732 | 0.59933 | 32.434 | 26.094 | 1437.6 |
| 6.0 | -1.725 | 0.59999 | 32.465 | 26.118 | 1437.7 |
| 7.0 | -1.721 | 0.60094 | 32.517 | 26.160 | 1437.8 |
| 8.0 | -1.720 | 0.60124 | 32.533 | 26.173 | 1437.9 |
| 9.0 | -1.706 | 0.60210 | 32.567 | 26.201 | 1438.0 |
| 10.0 | -1.705 | 0.60212 | 32.568 | 26.201 | 1438.0 |
| 11.0 | -1.706 | 0.60224 | 32.575 | 26.207 | 1438.0 |
| 12.0 | -1.706 | 0.60221 | 32.573 | 26.205 | 1438.0 |
| 13.0 | -1.707 | 0.60216 | 32.570 | 26.203 | 1438.1 |
| 14.0 | -1.713 | 0.60181 | 32.555 | 26.191 | 1438.0 |
| 15.0 | -1.712 | 0.60188 | 32.558 | 26.194 | 1438.0 |
| 16.0 | -1.711 | 0.60196 | 32.561 | 26.196 | 1438.1 |
| 17.0 | -1.710 | 0.60216 | 32.571 | 26.204 | 1438.1 |
| 18.0 | -1.709 | 0.60219 | 32.571 | 26.204 | 1438.1 |
| 19.0 | -1.708 | 0.60228 | 32.575 | 26.207 | 1438.1 |
| 20.0 | -1.703 | 0.60289 | 32.605 | 26.231 | 1438.2 |
| 21.0 | -1.702 | 0.60324 | 32.624 | 26.247 | 1438.3 |
| 22.0 | -1.713 | 0.60383 | 32.670 | 26.285 | 1438.3 |
| 23.0 | -1.712 | 0.60399 | 32.678 | 26.291 | 1438.3 |
| 24.0 | -1.712 | 0.60421 | 32.691 | 26.301 | 1438.4 |
| 25.0 | -1.713 | 0.60426 | 32.695 | 26.305 | 1438.4 |
| 26.0 | -1.711 | 0.60410 | 32.682 | 26.294 | 1438.4 |
| 27.0 | -1.714 | 0.60426 | 32.694 | 26.304 | 1438.4 |
| 28.0 | -1.710 | 0.60429 | 32.691 | 26.302 | 1438.4 |
| 29.0 | -1.713 | 0.60432 | 32.695 | 26.305 | 1438.5 |
| 30.0 | -1.731 | 0.60456 | 32.729 | 26.333 | 1438.4 |
| 31.0 | -1.735 | 0.60499 | 32.758 | 26.356 | 1438.5 |
| 32.0 | -1.735 | 0.60505 | 32.760 | 26.359 | 1438.5 |
| 33.0 | -1.737 | 0.60509 | 32.765 | 26.362 | 1438.5 |
| 34.0 | -1.736 | 0.60516 | 32.767 | 26.364 | 1438.5 |
| 35.0 | -1.737 | 0.60519 | 32.770 | 26.366 | 1438.5 |
| 37.5 | -1.735 | 0.60537 | 32.776 | 26.372 | 1438.6 |
| 40.0 | -1.735 | 0.60549 | 32.783 | 26.377 | 1438.6 |
| 42.5 | -1.732 | 0.60610 | 32.813 | 26.401 | 1438.7 |
| 45.0 | -1.731 | 0.60627 | 32.822 | 26.408 | 1438.8 |
| 47.5 | -1.729 | 0.60652 | 32.833 | 26.417 | 1438.9 |
| 50.0 | -1.726 | 0.60671 | 32.839 | 26.422 | 1438.9 |
| 55.0 | -1.729 | 0.60685 | 32.847 | 26.429 | 1439.0 |
| 60.0 | -1.735 | 0.60694 | 32.857 | 26.437 | 1439.1 |
| 65.0 | -1.740 | 0.60692 | 32.857 | 26.437 | 1439.1 |
| 70.0 | -1.740 | 0.60697 | 32.857 | 26.437 | 1439.2 |
| 75.0 | -1.735 | 0.60731 | 32.869 | 26.447 | 1439.3 |
| 78.6 | -1.731 | 0.60754 | 32.876 | 26.452 | 1439.4 |



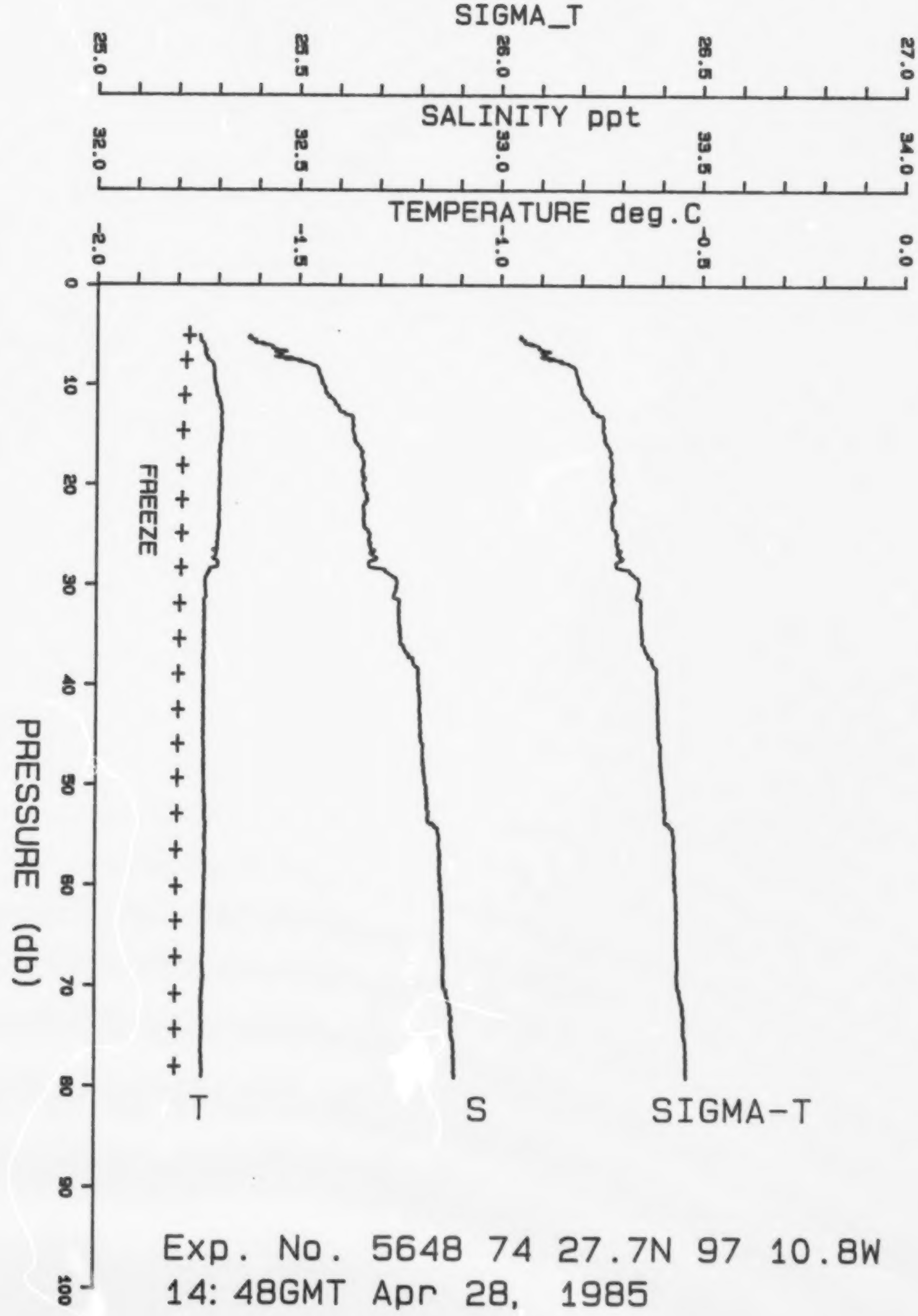
Exp. No. 5647 74 27.7N 97 10.8W
14:12GMT Apr 28, 1985

Ice Keel '85 Experiment　Barrow Strait　Exp. No. 5648

Lat. 75 27.7N　Lon. 97 10.8W　DDMMYY 28/ 4/85

Ice Thickness 1.5m　Water Depth 114m　G.M.T. 1448

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.746 | 0.59813 | 32.378 | 26.048 | 1437.5 |
| 6.0 | -1.734 | 0.59907 | 32.420 | 26.082 | 1437.6 |
| 7.0 | -1.732 | 0.59965 | 32.452 | 26.108 | 1437.7 |
| 8.0 | -1.712 | 0.60138 | 32.532 | 26.172 | 1437.9 |
| 9.0 | -1.710 | 0.60175 | 32.552 | 26.188 | 1437.9 |
| 10.0 | -1.707 | 0.60197 | 32.560 | 26.195 | 1438.0 |
| 11.0 | -1.704 | 0.60223 | 32.573 | 26.205 | 1438.0 |
| 12.0 | -1.694 | 0.60276 | 32.592 | 26.221 | 1438.1 |
| 13.0 | -1.693 | 0.60322 | 32.618 | 26.242 | 1438.2 |
| 14.0 | -1.693 | 0.60351 | 32.634 | 26.255 | 1438.2 |
| 15.0 | -1.694 | 0.60356 | 32.638 | 26.258 | 1438.2 |
| 16.0 | -1.696 | 0.60365 | 32.645 | 26.264 | 1438.3 |
| 17.0 | -1.695 | 0.60383 | 32.653 | 26.270 | 1438.3 |
| 18.0 | -1.699 | 0.60390 | 32.661 | 26.277 | 1438.3 |
| 19.0 | -1.696 | 0.60389 | 32.656 | 26.273 | 1438.3 |
| 20.0 | -1.695 | 0.60392 | 32.657 | 26.274 | 1438.3 |
| 21.0 | -1.698 | 0.60406 | 32.668 | 26.282 | 1438.4 |
| 22.0 | -1.697 | 0.60392 | 32.659 | 26.275 | 1438.4 |
| 23.0 | -1.698 | 0.60391 | 32.658 | 26.275 | 1438.4 |
| 24.0 | -1.699 | 0.60396 | 32.661 | 26.277 | 1438.4 |
| 25.0 | -1.700 | 0.60416 | 32.674 | 26.288 | 1438.4 |
| 26.0 | -1.701 | 0.60416 | 32.675 | 26.288 | 1438.4 |
| 27.0 | -1.706 | 0.60424 | 32.684 | 26.296 | 1438.4 |
| 28.0 | -1.701 | 0.60417 | 32.674 | 26.288 | 1438.5 |
| 29.0 | -1.727 | 0.60465 | 32.730 | 26.334 | 1438.4 |
| 30.0 | -1.730 | 0.60478 | 32.741 | 26.342 | 1438.4 |
| 31.0 | -1.730 | 0.60469 | 32.734 | 26.337 | 1438.5 |
| 32.0 | -1.734 | 0.60486 | 32.748 | 26.349 | 1438.5 |
| 33.0 | -1.732 | 0.60488 | 32.748 | 26.348 | 1438.5 |
| 34.0 | -1.734 | 0.60491 | 32.750 | 26.350 | 1438.5 |
| 35.0 | -1.732 | 0.60494 | 32.750 | 26.350 | 1438.5 |
| 37.5 | -1.734 | 0.60548 | 32.781 | 26.376 | 1438.6 |
| 40.0 | -1.735 | 0.60576 | 32.799 | 26.390 | 1438.7 |
| 42.5 | -1.733 | 0.60584 | 32.800 | 26.390 | 1438.7 |
| 45.0 | -1.733 | 0.60589 | 32.801 | 26.392 | 1438.8 |
| 47.5 | -1.733 | 0.60604 | 32.808 | 26.397 | 1438.8 |
| 50.0 | -1.733 | 0.60624 | 32.819 | 26.406 | 1438.9 |
| 55.0 | -1.729 | 0.60689 | 32.850 | 26.431 | 1439.0 |
| 60.0 | -1.731 | 0.60700 | 32.856 | 26.436 | 1439.1 |
| 65.0 | -1.734 | 0.60709 | 32.861 | 26.440 | 1439.2 |
| 70.0 | -1.733 | 0.60718 | 32.862 | 26.441 | 1439.2 |
| 75.0 | -1.737 | 0.60753 | 32.884 | 26.459 | 1439.3 |
| 79.1 | -1.736 | 0.60769 | 32.890 | 26.464 | 1439.4 |



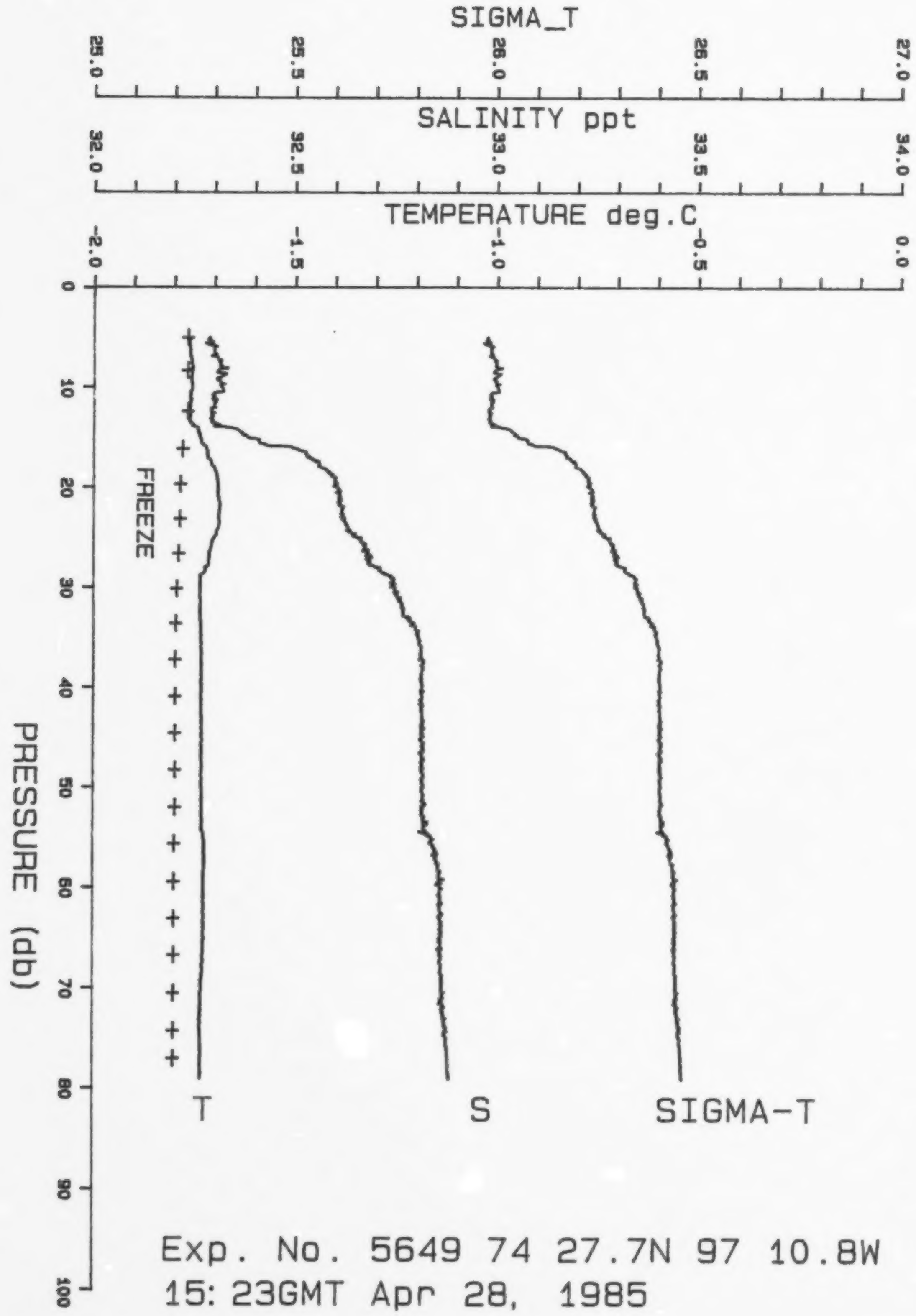
Exp. No. 5648 74 27.7N 97 10.8W
14: 48GMT Apr 28, 1985

Ice Keel '85 Experiment   Barrow Strait   Exp. No. 5649

Lat. 75 27.7N   Lon. 97 10.8W   DDMMYY 28/ 4/85

Ice Thickness 1.5m   Water Depth 114m   G.M.T. 1523

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.766 | 0.59622 | 32.286 | 25.974 | 1437.3 |
| 6.0 | -1.764 | 0.59649 | 32.299 | 25.984 | 1437.3 |
| 7.0 | -1.760 | 0.59668 | 32.305 | 25.989 | 1437.3 |
| 8.0 | -1.755 | 0.59695 | 32.316 | 25.998 | 1437.4 |
| 9.0 | -1.760 | 0.59679 | 32.311 | 25.994 | 1437.4 |
| 10.0 | -1.756 | 0.59697 | 32.317 | 25.999 | 1437.4 |
| 11.0 | -1.764 | 0.59653 | 32.299 | 25.984 | 1437.4 |
| 12.0 | -1.765 | 0.59656 | 32.301 | 25.986 | 1437.4 |
| 13.0 | -1.762 | 0.59650 | 32.293 | 25.979 | 1437.4 |
| 14.0 | -1.746 | 0.59732 | 32.324 | 26.005 | 1437.5 |
| 15.0 | -1.737 | 0.59846 | 32.382 | 26.051 | 1437.7 |
| 16.0 | -1.721 | 0.60059 | 32.490 | 26.138 | 1437.9 |
| 17.0 | -1.718 | 0.60131 | 32.529 | 26.170 | 1438.0 |
| 18.0 | -1.701 | 0.60217 | 32.561 | 26.196 | 1438.1 |
| 19.0 | -1.694 | 0.60294 | 32.599 | 26.226 | 1438.2 |
| 20.0 | -1.691 | 0.60303 | 32.600 | 26.227 | 1438.3 |
| 21.0 | -1.692 | 0.60320 | 32.610 | 26.236 | 1438.3 |
| 22.0 | -1.688 | 0.60337 | 32.616 | 26.240 | 1438.3 |
| 23.0 | -1.691 | 0.60333 | 32.616 | 26.240 | 1438.4 |
| 24.0 | -1.692 | 0.60355 | 32.629 | 26.251 | 1438.4 |
| 25.0 | -1.702 | 0.60374 | 32.651 | 26.269 | 1438.4 |
| 26.0 | -1.709 | 0.60393 | 32.670 | 26.284 | 1438.4 |
| 27.0 | -1.714 | 0.60408 | 32.684 | 26.296 | 1438.4 |
| 28.0 | -1.724 | 0.60427 | 32.706 | 26.314 | 1438.4 |
| 29.0 | -1.736 | 0.60460 | 32.737 | 26.340 | 1438.4 |
| 30.0 | -1.737 | 0.60472 | 32.744 | 26.346 | 1438.4 |
| 31.0 | -1.736 | 0.60493 | 32.756 | 26.355 | 1438.5 |
| 32.0 | -1.737 | 0.60505 | 32.763 | 26.361 | 1438.5 |
| 33.0 | -1.736 | 0.60539 | 32.781 | 26.376 | 1438.5 |
| 34.0 | -1.734 | 0.60569 | 32.796 | 26.388 | 1438.6 |
| 35.0 | -1.735 | 0.60582 | 32.805 | 26.395 | 1438.6 |
| 37.5 | -1.735 | 0.60602 | 32.815 | 26.403 | 1438.6 |
| 40.0 | -1.733 | 0.60604 | 32.813 | 26.401 | 1438.7 |
| 42.5 | -1.732 | 0.60607 | 32.812 | 26.400 | 1438.7 |
| 45.0 | -1.732 | 0.60611 | 32.812 | 26.401 | 1438.8 |
| 47.5 | -1.732 | 0.60612 | 32.812 | 26.400 | 1438.8 |
| 50.0 | -1.731 | 0.60616 | 32.812 | 26.400 | 1438.9 |
| 55.0 | -1.726 | 0.60668 | 32.834 | 26.418 | 1439.0 |
| 60.0 | -1.727 | 0.60715 | 32.859 | 26.439 | 1439.1 |
| 65.0 | -1.725 | 0.60718 | 32.856 | 26.436 | 1439.2 |
| 70.0 | -1.731 | 0.60721 | 32.862 | 26.441 | 1439.3 |
| 75.0 | -1.735 | 0.60742 | 32.875 | 26.452 | 1439.3 |
| 79.1 | -1.735 | 0.60757 | 32.882 | 26.457 | 1439.4 |



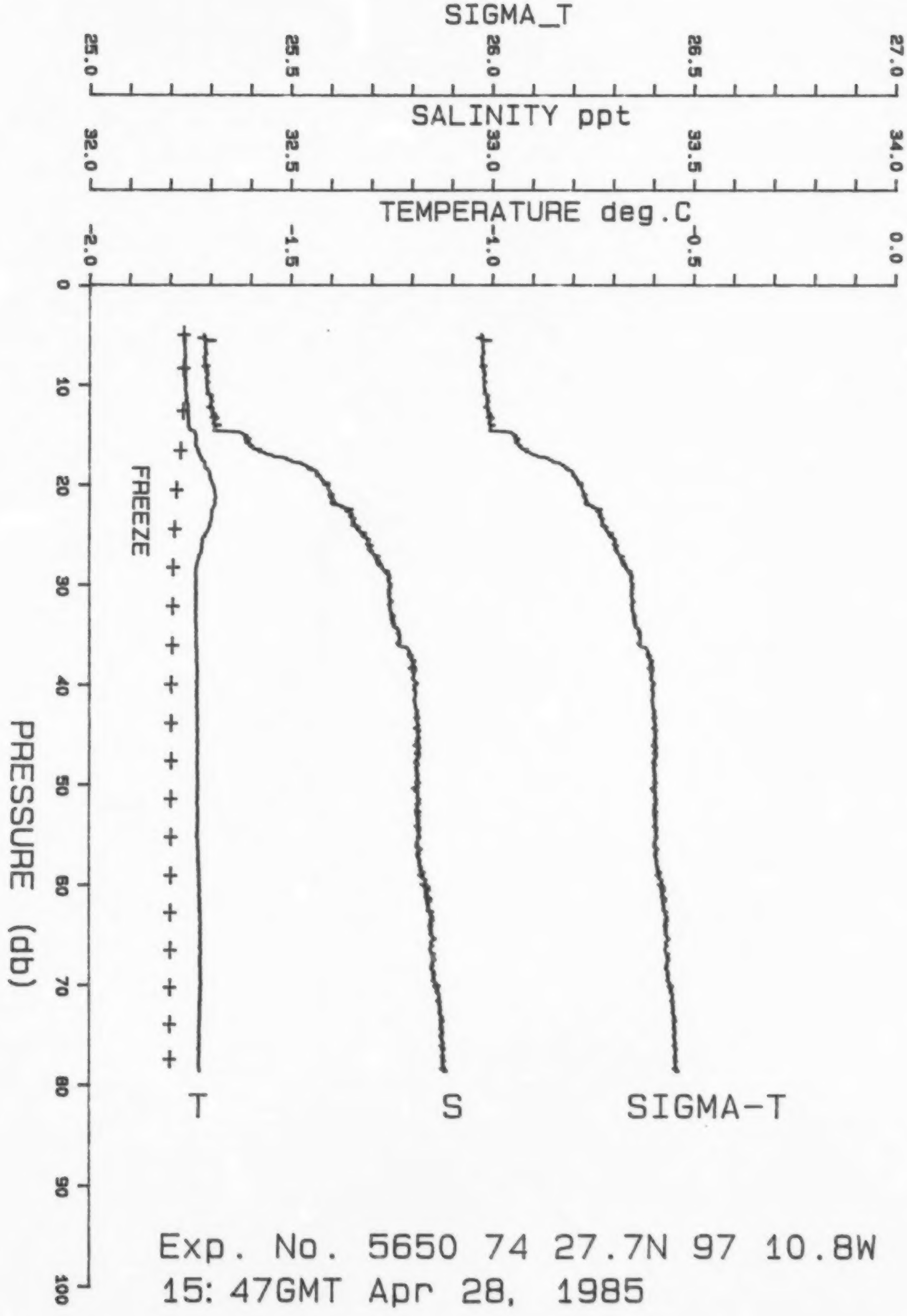
Exp. No. 5649 74 27.7N 97 10.8W
15: 23GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5650

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1547

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 4.9 | -1.765 | 0.59617 | 32.283 | 25.971 | 1437.2 |
| 5.0 | -1.765 | 0.59619 | 32.283 | 25.971 | 1437.3 |
| 6.0 | -1.767 | 0.59624 | 32.288 | 25.975 | 1437.3 |
| 7.0 | -1.765 | 0.59627 | 32.287 | 25.974 | 1437.3 |
| 8.0 | -1.763 | 0.59631 | 32.286 | 25.974 | 1437.3 |
| 9.0 | -1.764 | 0.59642 | 32.294 | 25.980 | 1437.3 |
| 10.0 | -1.763 | 0.59641 | 32.291 | 25.978 | 1437.4 |
| 11.0 | -1.763 | 0.59662 | 32.303 | 25.987 | 1437.4 |
| 12.0 | -1.757 | 0.59671 | 32.301 | 25.986 | 1437.4 |
| 13.0 | -1.756 | 0.59692 | 32.312 | 25.995 | 1437.5 |
| 14.0 | -1.755 | 0.59704 | 32.317 | 25.999 | 1437.5 |
| 15.0 | -1.736 | 0.59844 | 32.380 | 26.049 | 1437.7 |
| 16.0 | -1.738 | 0.59869 | 32.396 | 26.063 | 1437.7 |
| 17.0 | -1.726 | 0.59973 | 32.445 | 26.102 | 1437.8 |
| 18.0 | -1.714 | 0.60147 | 32.533 | 26.174 | 1438.0 |
| 19.0 | -1.702 | 0.60229 | 32.568 | 26.202 | 1438.2 |
| 20.0 | -1.692 | 0.60269 | 32.581 | 26.212 | 1438.2 |
| 21.0 | -1.688 | 0.60309 | 32.600 | 26.227 | 1438.3 |
| 22.0 | -1.690 | 0.60322 | 32.609 | 26.234 | 1438.3 |
| 23.0 | -1.699 | 0.60375 | 32.649 | 26.268 | 1438.4 |
| 24.0 | -1.701 | 0.60379 | 32.654 | 26.271 | 1438.4 |
| 25.0 | -1.713 | 0.60396 | 32.676 | 26.289 | 1438.4 |
| 26.0 | -1.722 | 0.60405 | 32.691 | 26.302 | 1438.4 |
| 27.0 | -1.729 | 0.60420 | 32.707 | 26.315 | 1438.4 |
| 28.0 | -1.735 | 0.60427 | 32.717 | 26.323 | 1438.4 |
| 29.0 | -1.737 | 0.60469 | 32.744 | 26.345 | 1438.4 |
| 30.0 | -1.736 | 0.60473 | 32.744 | 26.346 | 1438.4 |
| 31.0 | -1.736 | 0.60469 | 32.741 | 26.343 | 1438.4 |
| 32.0 | -1.735 | 0.60476 | 32.744 | 26.346 | 1438.5 |
| 33.0 | -1.736 | 0.60489 | 32.752 | 26.352 | 1438.5 |
| 34.0 | -1.736 | 0.60490 | 32.752 | 26.351 | 1438.5 |
| 35.0 | -1.735 | 0.60521 | 32.769 | 26.365 | 1438.5 |
| 37.5 | -1.736 | 0.60571 | 32.798 | 26.389 | 1438.6 |
| 40.0 | -1.734 | 0.60597 | 32.810 | 26.399 | 1438.7 |
| 42.5 | -1.732 | 0.60608 | 32.813 | 26.401 | 1438.7 |
| 45.0 | -1.732 | 0.60614 | 32.815 | 26.403 | 1438.8 |
| 47.5 | -1.732 | 0.60608 | 32.809 | 26.398 | 1438.8 |
| 50.0 | -1.731 | 0.60616 | 32.812 | 26.400 | 1438.9 |
| 55.0 | -1.731 | 0.60631 | 32.817 | 26.404 | 1438.9 |
| 60.0 | -1.729 | 0.60674 | 32.838 | 26.422 | 1439.1 |
| 65.0 | -1.725 | 0.60703 | 32.847 | 26.429 | 1439.2 |
| 70.0 | -1.724 | 0.60732 | 32.860 | 26.440 | 1439.3 |
| 75.0 | -1.727 | 0.60756 | 32.875 | 26.452 | 1439.4 |
| 78.6 | -1.727 | 0.60765 | 32.878 | 26.454 | 1439.4 |



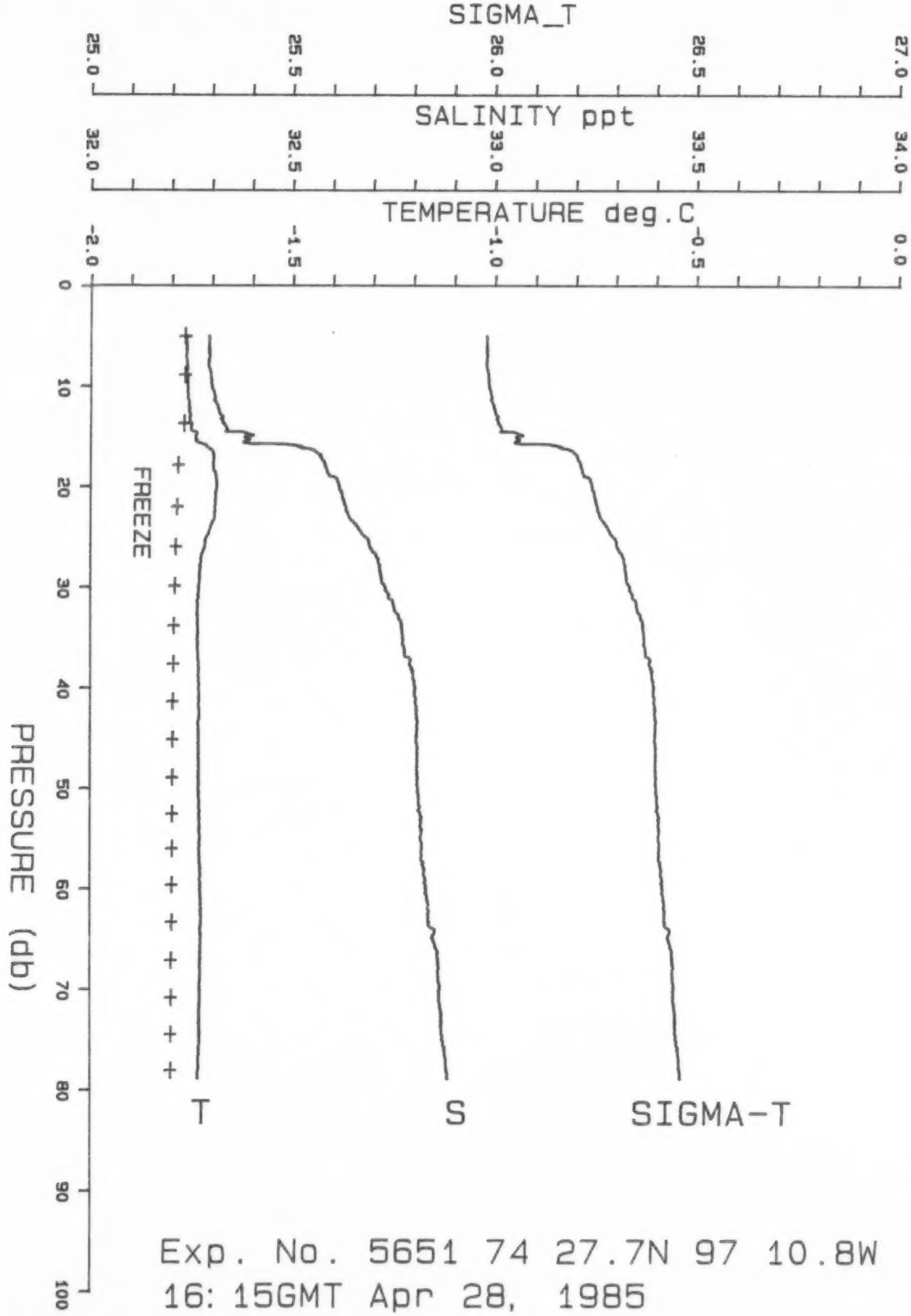
Exp. No. 5650 74 27.7N 97 10.8W
15: 47GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5651

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1615

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.765 | 0.59630 | 32.290 | 25.977 | 1437.3 |
| 6.0 | -1.764 | 0.59634 | 32.291 | 25.977 | 1437.3 |
| 7.0 | -1.764 | 0.59636 | 32.292 | 25.978 | 1437.3 |
| 8.0 | -1.762 | 0.59639 | 32.290 | 25.977 | 1437.3 |
| 9.0 | -1.762 | 0.59649 | 32.296 | 25.981 | 1437.3 |
| 10.0 | -1.762 | 0.59656 | 32.299 | 25.984 | 1437.4 |
| 11.0 | -1.762 | 0.59670 | 32.307 | 25.990 | 1437.4 |
| 12.0 | -1.757 | 0.59688 | 32.311 | 25.994 | 1437.4 |
| 13.0 | -1.757 | 0.59715 | 32.326 | 26.006 | 1437.5 |
| 14.0 | -1.754 | 0.59734 | 32.334 | 26.012 | 1437.5 |
| 15.0 | -1.742 | 0.59832 | 32.379 | 26.048 | 1437.7 |
| 16.0 | -1.713 | 0.60114 | 32.514 | 26.158 | 1438.0 |
| 17.0 | -1.696 | 0.60235 | 32.566 | 26.200 | 1438.2 |
| 18.0 | -1.697 | 0.60254 | 32.579 | 26.210 | 1438.2 |
| 19.0 | -1.691 | 0.60304 | 32.601 | 26.228 | 1438.3 |
| 20.0 | -1.690 | 0.60329 | 32.614 | 26.239 | 1438.3 |
| 21.0 | -1.692 | 0.60337 | 32.620 | 26.244 | 1438.3 |
| 22.0 | -1.695 | 0.60347 | 32.629 | 26.251 | 1438.3 |
| 23.0 | -1.694 | 0.60364 | 32.638 | 26.258 | 1438.4 |
| 24.0 | -1.707 | 0.60381 | 32.661 | 26.277 | 1438.4 |
| 25.0 | -1.715 | 0.60397 | 32.679 | 26.292 | 1438.4 |
| 26.0 | -1.720 | 0.60408 | 32.690 | 26.301 | 1438.4 |
| 27.0 | -1.727 | 0.60422 | 32.706 | 26.314 | 1438.4 |
| 28.0 | -1.729 | 0.60428 | 32.711 | 26.319 | 1438.4 |
| 29.0 | -1.731 | 0.60435 | 32.716 | 26.323 | 1438.4 |
| 30.0 | -1.735 | 0.60449 | 32.729 | 26.333 | 1438.4 |
| 31.0 | -1.734 | 0.60462 | 32.735 | 26.338 | 1438.4 |
| 32.0 | -1.736 | 0.60482 | 32.748 | 26.348 | 1438.5 |
| 33.0 | -1.736 | 0.60502 | 32.760 | 26.358 | 1438.5 |
| 34.0 | -1.736 | 0.60517 | 32.767 | 26.364 | 1438.5 |
| 35.0 | -1.736 | 0.60521 | 32.770 | 26.366 | 1438.5 |
| 37.5 | -1.733 | 0.60556 | 32.786 | 26.379 | 1438.6 |
| 40.0 | -1.734 | 0.60584 | 32.802 | 26.392 | 1438.7 |
| 42.5 | -1.731 | 0.60595 | 32.804 | 26.394 | 1438.7 |
| 45.0 | -1.732 | 0.60594 | 32.804 | 26.394 | 1438.8 |
| 47.5 | -1.732 | 0.60603 | 32.806 | 26.396 | 1438.8 |
| 50.0 | -1.734 | 0.60606 | 32.809 | 26.398 | 1438.8 |
| 55.0 | -1.729 | 0.60633 | 32.816 | 26.404 | 1439.0 |
| 60.0 | -1.729 | 0.60661 | 32.830 | 26.415 | 1439.1 |
| 65.0 | -1.728 | 0.60700 | 32.849 | 26.431 | 1439.2 |
| 70.0 | -1.729 | 0.60726 | 32.863 | 26.442 | 1439.3 |
| 75.0 | -1.729 | 0.60742 | 32.869 | 26.447 | 1439.4 |
| 78.8 | -1.734 | 0.60763 | 32.884 | 26.459 | 1439.4 |



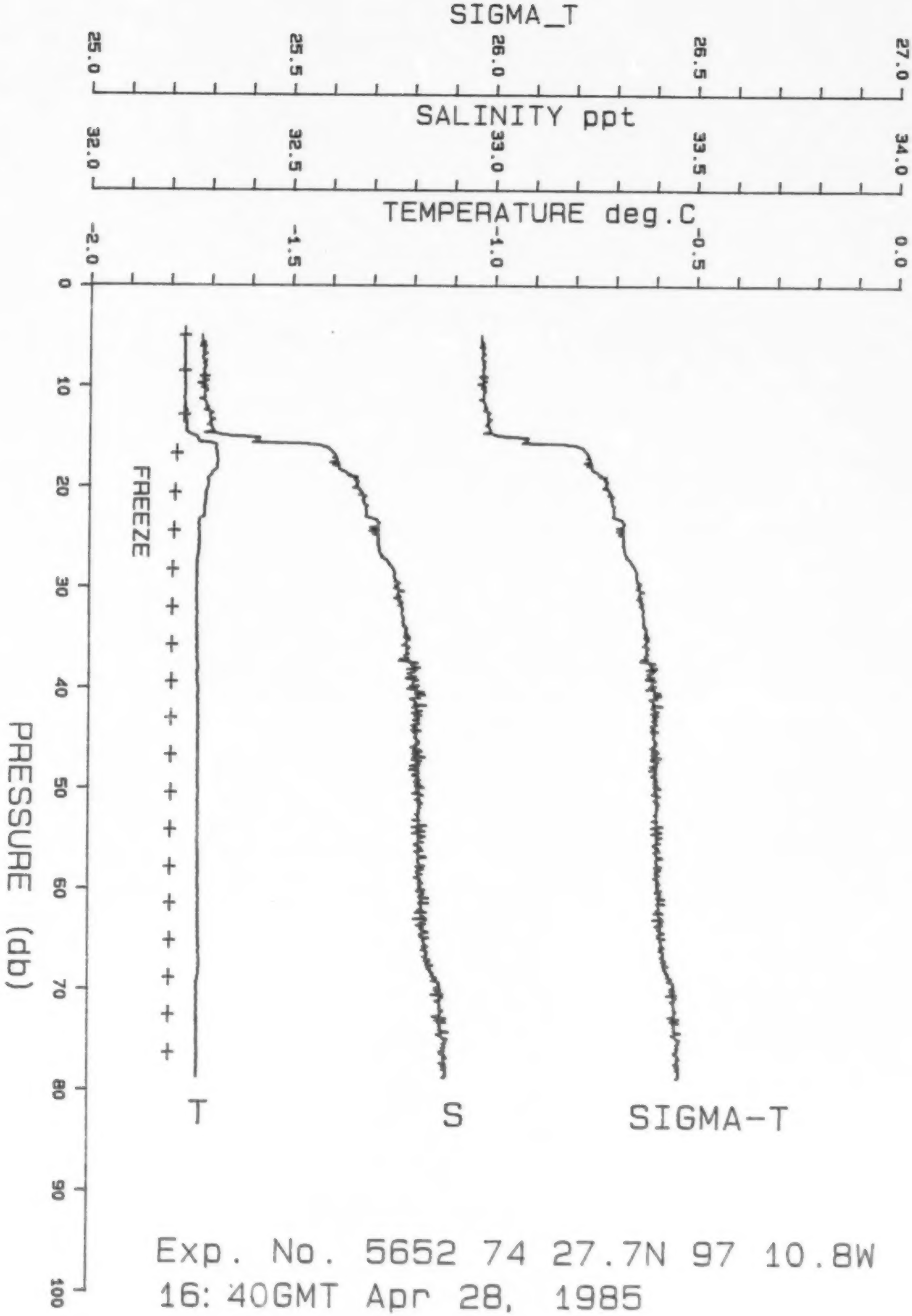
Exp. No. 5651 74 27.7N 97 10.8W
16: 15GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5652

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1640

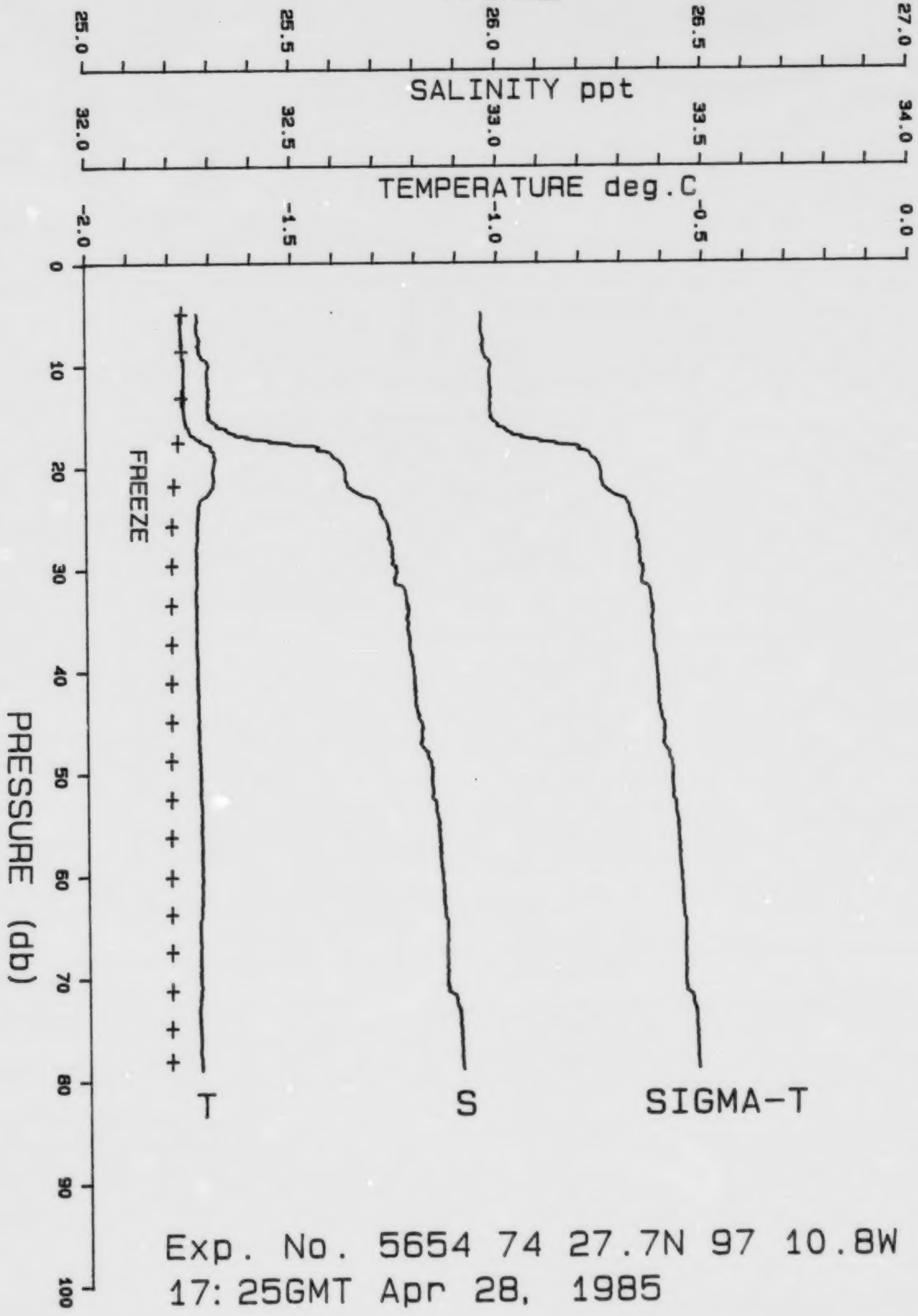
| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 4.9 | -1.770 | 0.59597 | 32.276 | 25.965 | 1437.2 |
| 5.0 | -1.768 | 0.59599 | 32.275 | 25.965 | 1437.2 |
| 6.0 | -1.767 | 0.59607 | 32.278 | 25.967 | 1437.2 |
| 7.0 | -1.768 | 0.59604 | 32.276 | 25.965 | 1437.3 |
| 8.0 | -1.769 | 0.59618 | 32.286 | 25.973 | 1437.3 |
| 9.0 | -1.766 | 0.59604 | 32.274 | 25.964 | 1437.3 |
| 10.0 | -1.766 | 0.59627 | 32.287 | 25.974 | 1437.3 |
| 11.0 | -1.768 | 0.59618 | 32.283 | 25.971 | 1437.3 |
| 12.0 | -1.767 | 0.59629 | 32.287 | 25.975 | 1437.4 |
| 13.0 | -1.763 | 0.59652 | 32.296 | 25.982 | 1437.4 |
| 14.0 | -1.761 | 0.59659 | 32.298 | 25.983 | 1437.4 |
| 15.0 | -1.737 | 0.59802 | 32.355 | 26.029 | 1437.6 |
| 16.0 | -1.688 | 0.60272 | 32.580 | 26.211 | 1438.2 |
| 17.0 | -1.685 | 0.60327 | 32.610 | 26.235 | 1438.3 |
| 18.0 | -1.685 | 0.60336 | 32.615 | 26.239 | 1438.3 |
| 19.0 | -1.706 | 0.60374 | 32.660 | 26.276 | 1438.3 |
| 20.0 | -1.707 | 0.60375 | 32.660 | 26.277 | 1438.3 |
| 21.0 | -1.714 | 0.60389 | 32.675 | 26.289 | 1438.3 |
| 22.0 | -1.718 | 0.60394 | 32.683 | 26.295 | 1438.3 |
| 23.0 | -1.722 | 0.60398 | 32.689 | 26.300 | 1438.3 |
| 24.0 | -1.731 | 0.60414 | 32.708 | 26.316 | 1438.3 |
| 25.0 | -1.729 | 0.60424 | 32.711 | 26.318 | 1438.3 |
| 26.0 | -1.732 | 0.60428 | 32.715 | 26.322 | 1438.3 |
| 27.0 | -1.733 | 0.60445 | 32.727 | 26.331 | 1438.4 |
| 28.0 | -1.736 | 0.60477 | 32.748 | 26.348 | 1438.4 |
| 29.0 | -1.734 | 0.60490 | 32.753 | 26.352 | 1438.4 |
| 30.0 | -1.735 | 0.60489 | 32.753 | 26.352 | 1438.4 |
| 31.0 | -1.735 | 0.60501 | 32.760 | 26.358 | 1438.5 |
| 32.0 | -1.735 | 0.60524 | 32.773 | 26.368 | 1438.5 |
| 33.0 | -1.735 | 0.60529 | 32.775 | 26.370 | 1438.5 |
| 34.0 | -1.736 | 0.60544 | 32.784 | 26.378 | 1438.5 |
| 35.0 | -1.735 | 0.60544 | 32.782 | 26.376 | 1438.6 |
| 37.5 | -1.733 | 0.60586 | 32.804 | 26.394 | 1438.6 |
| 40.0 | -1.732 | 0.60579 | 32.797 | 26.388 | 1438.7 |
| 42.5 | -1.731 | 0.60608 | 32.811 | 26.400 | 1438.7 |
| 45.0 | -1.732 | 0.60606 | 32.809 | 26.398 | 1438.8 |
| 47.5 | -1.730 | 0.60611 | 32.809 | 26.398 | 1438.8 |
| 50.0 | -1.731 | 0.60616 | 32.812 | 26.400 | 1438.9 |
| 55.0 | -1.732 | 0.60628 | 32.816 | 26.404 | 1438.9 |
| 60.0 | -1.731 | 0.60659 | 32.831 | 26.416 | 1439.0 |
| 65.0 | -1.727 | 0.60668 | 32.829 | 26.414 | 1439.1 |
| 70.0 | -1.732 | 0.60734 | 32.871 | 26.448 | 1439.3 |
| 75.0 | -1.733 | 0.60757 | 32.882 | 26.458 | 1439.4 |
| 78.7 | -1.731 | 0.60753 | 32.876 | 26.452 | 1439.4 |



Exp. No. 5652 74 27.7N 97 10.8W
16: 40GMT Apr 28, 1985

| | | |
|---|---|---|
| Ice Keel '85 Experiment | Barrow Strait | Exp. No. 5654 |
| Lat. 75 27.7N | Lon. 97 10.8W | DDMMYY 28/ 4/85 |
| Ice Thickness 1.5m | Water Depth 114m | G.M.T. 1725 |

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 4.9 | -1.770 | 0.59587 | 32.270 | 25.960 | 1437.2 |
| 5.0 | -1.770 | 0.59587 | 32.270 | 25.961 | 1437.2 |
| 6.0 | -1.769 | 0.59588 | 32.268 | 25.959 | 1437.2 |
| 7.0 | -1.768 | 0.59595 | 32.271 | 25.961 | 1437.3 |
| 8.0 | -1.767 | 0.59595 | 32.269 | 25.960 | 1437.3 |
| 9.0 | -1.768 | 0.59614 | 32.281 | 25.970 | 1437.3 |
| 10.0 | -1.765 | 0.59650 | 32.299 | 25.984 | 1437.4 |
| 11.0 | -1.762 | 0.59649 | 32.294 | 25.980 | 1437.4 |
| 12.0 | -1.762 | 0.59652 | 32.296 | 25.981 | 1437.4 |
| 13.0 | -1.763 | 0.59652 | 32.296 | 25.982 | 1437.4 |
| 14.0 | -1.763 | 0.59650 | 32.294 | 25.980 | 1437.4 |
| 15.0 | -1.761 | 0.59658 | 32.296 | 25.982 | 1437.4 |
| 16.0 | -1.754 | 0.59706 | 32.316 | 25.998 | 1437.5 |
| 17.0 | -1.736 | 0.59866 | 32.392 | 26.059 | 1437.7 |
| 18.0 | -1.697 | 0.60226 | 32.563 | 26.197 | 1438.2 |
| 19.0 | -1.687 | 0.60309 | 32.600 | 26.227 | 1438.3 |
| 20.0 | -1.692 | 0.60344 | 32.626 | 26.248 | 1438.3 |
| 21.0 | -1.691 | 0.60352 | 32.628 | 26.250 | 1438.3 |
| 22.0 | -1.695 | 0.60364 | 32.639 | 26.259 | 1438.3 |
| 23.0 | -1.719 | 0.60404 | 32.690 | 26.301 | 1438.3 |
| 24.0 | -1.729 | 0.60425 | 32.712 | 26.319 | 1438.3 |
| 25.0 | -1.729 | 0.60441 | 32.720 | 26.326 | 1438.3 |
| 26.0 | -1.730 | 0.60458 | 32.732 | 26.335 | 1438.4 |
| 27.0 | -1.730 | 0.60457 | 32.730 | 26.334 | 1438.4 |
| 28.0 | -1.735 | 0.60469 | 32.742 | 26.343 | 1438.4 |
| 29.0 | -1.735 | 0.60471 | 32.743 | 26.344 | 1438.4 |
| 30.0 | -1.734 | 0.60489 | 32.752 | 26.352 | 1438.4 |
| 31.0 | -1.733 | 0.60482 | 32.745 | 26.346 | 1438.5 |
| 32.0 | -1.737 | 0.60520 | 32.772 | 26.368 | 1438.5 |
| 33.0 | -1.735 | 0.60528 | 32.774 | 26.370 | 1438.5 |
| 34.0 | -1.735 | 0.60539 | 32.780 | 26.375 | 1438.5 |
| 35.0 | -1.736 | 0.60534 | 32.778 | 26.372 | 1438.5 |
| 37.5 | -1.735 | 0.60544 | 32.781 | 26.376 | 1438.6 |
| 40.0 | -1.732 | 0.60567 | 32.790 | 26.382 | 1438.7 |
| 42.5 | -1.733 | 0.60578 | 32.797 | 26.388 | 1438.7 |
| 45.0 | -1.731 | 0.60606 | 32.809 | 26.398 | 1438.8 |
| 47.5 | -1.731 | 0.60618 | 32.815 | 26.402 | 1438.8 |
| 50.0 | -1.727 | 0.60658 | 32.832 | 26.416 | 1438.9 |
| 55.0 | -1.725 | 0.60693 | 32.847 | 26.429 | 1439.0 |
| 60.0 | -1.726 | 0.60713 | 32.858 | 26.438 | 1439.1 |
| 65.0 | -1.732 | 0.60724 | 32.867 | 26.446 | 1439.2 |
| 70.0 | -1.731 | 0.60730 | 32.867 | 26.445 | 1439.3 |
| 75.0 | -1.734 | 0.60787 | 32.901 | 26.473 | 1439.4 |
| 78.9 | -1.730 | 0.60805 | 32.905 | 26.476 | 1439.5 |



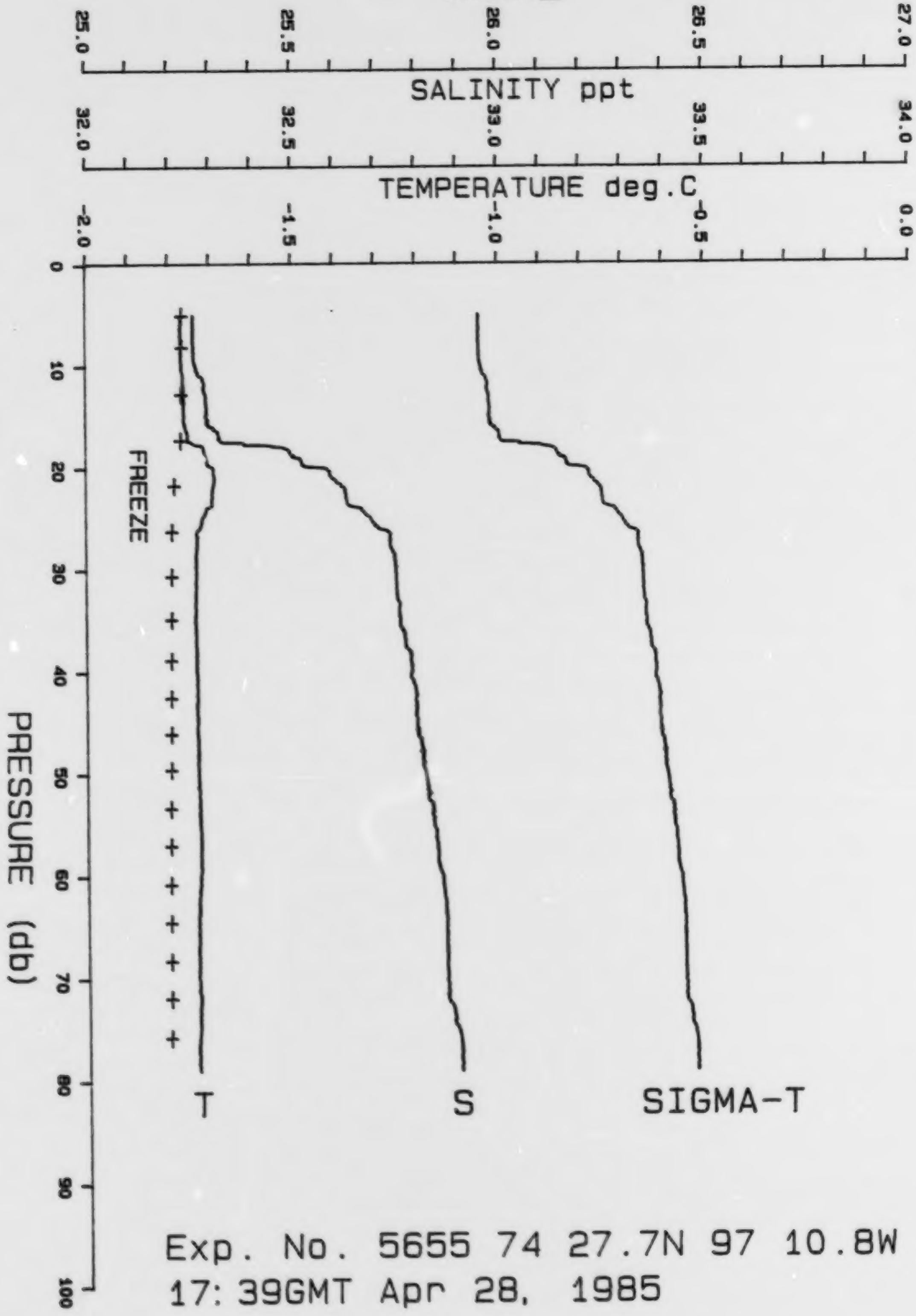
Exp. No. 5654 74 27.7N 97 10.8W
17:25GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5655

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1739

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.768 | 0.59577 | 32.261 | 25.954 | 1437.2 |
| 6.0 | -1.769 | 0.59577 | 32.262 | 25.954 | 1437.2 |
| 7.0 | -1.769 | 0.59577 | 32.261 | 25.953 | 1437.2 |
| 8.0 | -1.770 | 0.59579 | 32.263 | 25.955 | 1437.2 |
| 9.0 | -1.769 | 0.59582 | 32.264 | 25.955 | 1437.3 |
| 10.0 | -1.767 | 0.59593 | 32.267 | 25.958 | 1437.3 |
| 11.0 | -1.764 | 0.59625 | 32.282 | 25.970 | 1437.4 |
| 12.0 | -1.763 | 0.59633 | 32.286 | 25.973 | 1437.4 |
| 13.0 | -1.763 | 0.59647 | 32.293 | 25.979 | 1437.4 |
| 14.0 | -1.763 | 0.59650 | 32.294 | 25.980 | 1437.4 |
| 15.0 | -1.761 | 0.59651 | 32.292 | 25.978 | 1437.4 |
| 16.0 | -1.759 | 0.59686 | 32.310 | 25.993 | 1437.5 |
| 17.0 | -1.755 | 0.59722 | 32.326 | 26.006 | 1437.6 |
| 18.0 | -1.716 | 0.60045 | 32.475 | 26.126 | 1438.0 |
| 19.0 | -1.708 | 0.60125 | 32.514 | 26.157 | 1438.1 |
| 20.0 | -1.692 | 0.60249 | 32.569 | 26.202 | 1438.2 |
| 21.0 | -1.688 | 0.60305 | 32.597 | 26.225 | 1438.3 |
| 22.0 | -1.693 | 0.60346 | 32.626 | 26.249 | 1438.3 |
| 23.0 | -1.695 | 0.60355 | 32.634 | 26.255 | 1438.4 |
| 24.0 | -1.709 | 0.60389 | 32.668 | 26.283 | 1438.4 |
| 25.0 | -1.718 | 0.60412 | 32.691 | 26.302 | 1438.4 |
| 26.0 | -1.727 | 0.60431 | 32.712 | 26.319 | 1438.4 |
| 27.0 | -1.731 | 0.60471 | 32.739 | 26.341 | 1438.4 |
| 28.0 | -1.734 | 0.60473 | 32.743 | 26.344 | 1438.4 |
| 29.0 | -1.732 | 0.60483 | 32.747 | 26.347 | 1438.4 |
| 30.0 | -1.734 | 0.60488 | 32.751 | 26.351 | 1438.4 |
| 31.0 | -1.734 | 0.60489 | 32.751 | 26.351 | 1438.5 |
| 32.0 | -1.735 | 0.60491 | 32.754 | 26.353 | 1438.5 |
| 33.0 | -1.734 | 0.60500 | 32.757 | 26.356 | 1438.5 |
| 34.0 | -1.735 | 0.60503 | 32.759 | 26.357 | 1438.5 |
| 35.0 | -1.737 | 0.60505 | 32.761 | 26.359 | 1438.5 |
| 37.5 | -1.733 | 0.60532 | 32.772 | 26.368 | 1438.6 |
| 40.0 | -1.733 | 0.60560 | 32.787 | 26.380 | 1438.7 |
| 42.5 | -1.732 | 0.60583 | 32.798 | 26.389 | 1438.7 |
| 45.0 | -1.732 | 0.60590 | 32.801 | 26.391 | 1438.8 |
| 47.5 | -1.731 | 0.60612 | 32.811 | 26.399 | 1438.8 |
| 50.0 | -1.730 | 0.60629 | 32.819 | 26.406 | 1438.9 |
| 55.0 | -1.726 | 0.60677 | 32.839 | 26.422 | 1439.0 |
| 60.0 | -1.727 | 0.60714 | 32.860 | 26.439 | 1439.1 |
| 65.0 | -1.731 | 0.60725 | 32.867 | 26.445 | 1439.2 |
| 70.0 | -1.732 | 0.60730 | 32.868 | 26.446 | 1439.3 |
| 75.0 | -1.732 | 0.60783 | 32.896 | 26.469 | 1439.4 |
| 79.0 | -1.733 | 0.60796 | 32.903 | 26.474 | 1439.4 |



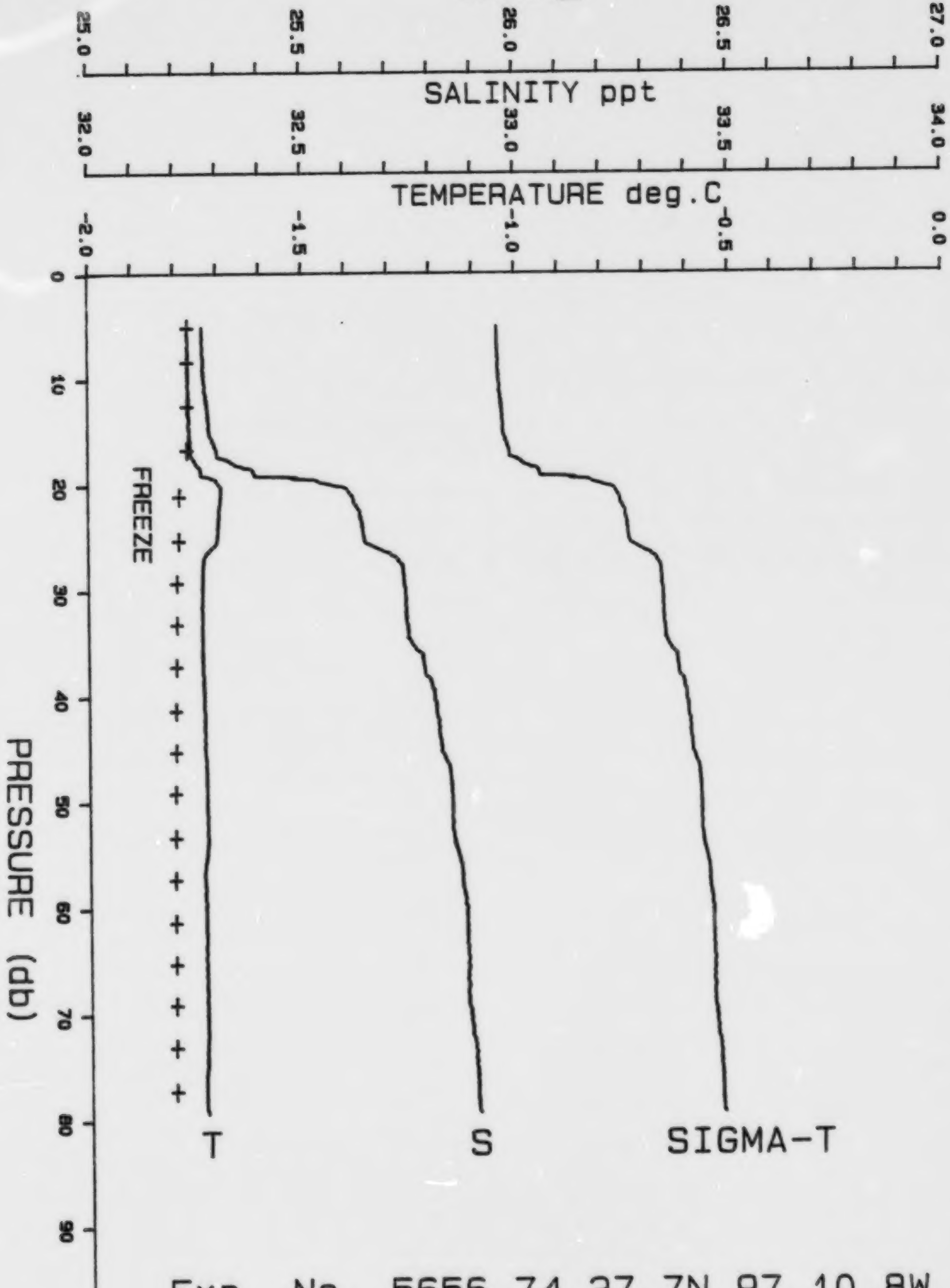
Exp. No. 5655 74 27.7N 97 10.8W
17:39GMT Apr 28, 1985

Ice Keel '85 Experiment     Barrow Strait     Exp. No. 5656

Lat. 75 27.7N     Lon. 97 10.8W     DDMMYY 28/ 4/85

Ice Thickness 1.5m     Water Depth 114m     G.M.T. 1813

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.767 | 0.59589 | 32.267 | 25.959 | 1437.2 |
| 6.0 | -1.767 | 0.59591 | 32.269 | 25.960 | 1437.2 |
| 7.0 | -1.766 | 0.59593 | 32.267 | 25.958 | 1437.3 |
| 8.0 | -1.766 | 0.59597 | 32.269 | 25.960 | 1437.3 |
| 9.0 | -1.765 | 0.59598 | 32.269 | 25.959 | 1437.3 |
| 10.0 | -1.767 | 0.59603 | 32.273 | 25.963 | 1437.3 |
| 11.0 | -1.764 | 0.59607 | 32.271 | 25.962 | 1437.3 |
| 12.0 | -1.765 | 0.59617 | 32.278 | 25.967 | 1437.4 |
| 13.0 | -1.764 | 0.59622 | 32.279 | 25.968 | 1437.4 |
| 14.0 | -1.762 | 0.59629 | 32.281 | 25.969 | 1437.4 |
| 15.0 | -1.764 | 0.59633 | 32.285 | 25.973 | 1437.4 |
| 16.0 | -1.761 | 0.59657 | 32.295 | 25.981 | 1437.5 |
| 17.0 | -1.762 | 0.59669 | 32.302 | 25.987 | 1437.5 |
| 18.0 | -1.747 | 0.59767 | 32.343 | 26.020 | 1437.6 |
| 19.0 | -1.735 | 0.59864 | 32.389 | 26.056 | 1437.8 |
| 20.0 | -1.691 | 0.60252 | 32.570 | 26.203 | 1438.2 |
| 21.0 | -1.691 | 0.60336 | 32.619 | 26.242 | 1438.3 |
| 22.0 | -1.691 | 0.60346 | 32.625 | 26.248 | 1438.3 |
| 23.0 | -1.697 | 0.60361 | 32.639 | 26.259 | 1438.4 |
| 24.0 | -1.699 | 0.60366 | 32.644 | 26.263 | 1438.4 |
| 25.0 | -1.699 | 0.60370 | 32.645 | 26.264 | 1438.4 |
| 26.0 | -1.715 | 0.60397 | 32.678 | 26.291 | 1438.4 |
| 27.0 | -1.730 | 0.60445 | 32.723 | 26.328 | 1438.4 |
| 28.0 | -1.732 | 0.60464 | 32.735 | 26.338 | 1438.4 |
| 29.0 | -1.732 | 0.60466 | 32.737 | 26.339 | 1438.4 |
| 30.0 | -1.733 | 0.60474 | 32.742 | 26.343 | 1438.4 |
| 31.0 | -1.733 | 0.60474 | 32.742 | 26.343 | 1438.4 |
| 32.0 | -1.734 | 0.60476 | 32.743 | 26.344 | 1438.5 |
| 33.0 | -1.734 | 0.60481 | 32.745 | 26.346 | 1438.5 |
| 34.0 | -1.733 | 0.60486 | 32.747 | 26.348 | 1438.5 |
| 35.0 | -1.735 | 0.60504 | 32.758 | 26.357 | 1438.5 |
| 37.5 | -1.735 | 0.60554 | 32.787 | 26.380 | 1438.6 |
| 40.0 | -1.732 | 0.60599 | 32.809 | 26.398 | 1438.7 |
| 42.5 | -1.730 | 0.60620 | 32.817 | 26.404 | 1438.8 |
| 45.0 | -1.729 | 0.60633 | 32.822 | 26.409 | 1438.8 |
| 47.5 | -1.727 | 0.60678 | 32.845 | 26.427 | 1438.9 |
| 50.0 | -1.726 | 0.60686 | 32.848 | 26.430 | 1438.9 |
| 55.0 | -1.728 | 0.60714 | 32.863 | 26.442 | 1439.0 |
| 60.0 | -1.731 | 0.60743 | 32.881 | 26.456 | 1439.1 |
| 65.0 | -1.729 | 0.60753 | 32.881 | 26.457 | 1439.2 |
| 70.0 | -1.729 | 0.60769 | 32.888 | 26.462 | 1439.3 |
| 75.0 | -1.732 | 0.60793 | 32.902 | 26.474 | 1439.4 |
| 79.2 | -1.729 | 0.60811 | 32.908 | 26.478 | 1439.5 |



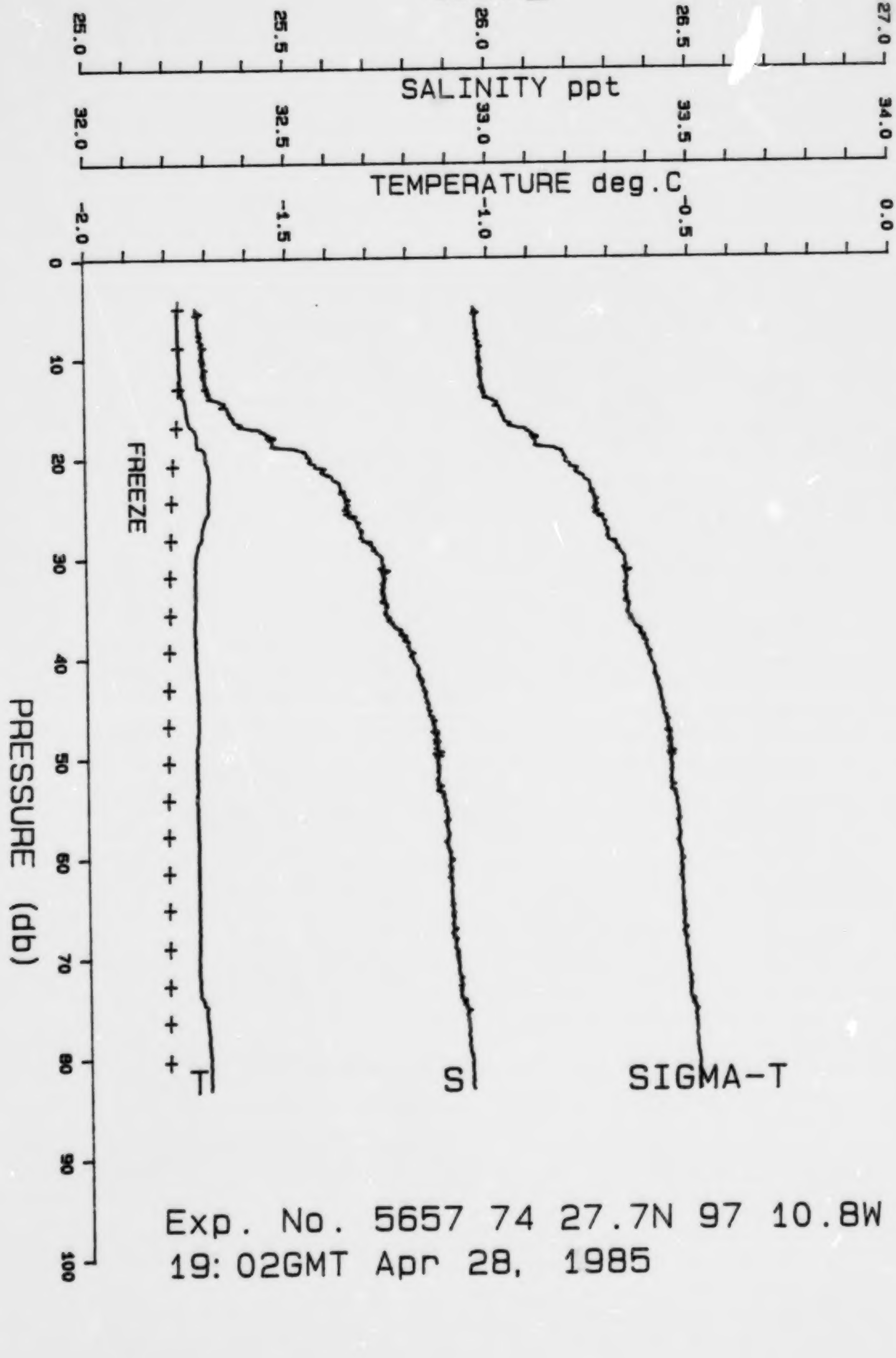
Exp. No. 5656 74 27.7N 97 10.8W
18: 13GMT Apr 28, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5657

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 28/ 4/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 1902

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 4.9 | -1.769 | 0.59597 | 32.275 | 25.965 | 1437.2 |
| 5.0 | -1.771 | 0.59597 | 32.277 | 25.966 | 1437.2 |
| 6.0 | -1.768 | 0.59606 | 32.279 | 25.968 | 1437.2 |
| 7.0 | -1.768 | 0.59614 | 32.283 | 25.971 | 1437.3 |
| 8.0 | -1.769 | 0.59619 | 32.286 | 25.974 | 1437.3 |
| 9.0 | -1.767 | 0.59636 | 32.293 | 25.979 | 1437.3 |
| 10.0 | -1.765 | 0.59628 | 32.285 | 25.973 | 1437.3 |
| 11.0 | -1.765 | 0.59641 | 32.293 | 25.979 | 1437.4 |
| 12.0 | -1.764 | 0.59648 | 32.296 | 25.981 | 1437.4 |
| 13.0 | -1.760 | 0.59672 | 32.305 | 25.989 | 1437.4 |
| 14.0 | -1.753 | 0.59696 | 32.310 | 25.993 | 1437.5 |
| 15.0 | -1.749 | 0.59774 | 32.352 | 26.027 | 1437.6 |
| 16.0 | -1.746 | 0.59802 | 32.365 | 26.037 | 1437.6 |
| 17.0 | -1.732 | 0.59904 | 32.410 | 26.074 | 1437.8 |
| 18.0 | -1.725 | 0.60017 | 32.468 | 26.121 | 1437.9 |
| 19.0 | -1.710 | 0.60113 | 32.508 | 26.153 | 1438.0 |
| 20.0 | -1.701 | 0.60206 | 32.554 | 26.190 | 1438.2 |
| 21.0 | -1.698 | 0.60269 | 32.586 | 26.216 | 1438.2 |
| 22.0 | -1.693 | 0.60319 | 32.611 | 26.236 | 1438.3 |
| 23.0 | -1.695 | 0.60353 | 32.632 | 26.253 | 1438.4 |
| 24.0 | -1.697 | 0.60373 | 32.646 | 26.264 | 1438.4 |
| 25.0 | -1.696 | 0.60383 | 32.650 | 26.268 | 1438.4 |
| 26.0 | -1.705 | 0.60393 | 32.664 | 26.280 | 1438.4 |
| 27.0 | -1.712 | 0.60402 | 32.678 | 26.291 | 1438.4 |
| 28.0 | -1.716 | 0.60410 | 32.686 | 26.298 | 1438.4 |
| 29.0 | -1.724 | 0.60443 | 32.714 | 26.321 | 1438.4 |
| 30.0 | -1.730 | 0.60466 | 32.734 | 26.337 | 1438.4 |
| 31.0 | -1.729 | 0.60462 | 32.730 | 26.334 | 1438.4 |
| 32.0 | -1.730 | 0.60472 | 32.735 | 26.338 | 1438.5 |
| 33.0 | -1.733 | 0.60467 | 32.735 | 26.338 | 1438.5 |
| 34.0 | -1.731 | 0.60470 | 32.734 | 26.337 | 1438.5 |
| 35.0 | -1.730 | 0.60484 | 32.742 | 26.343 | 1438.5 |
| 37.5 | -1.735 | 0.60546 | 32.781 | 26.376 | 1438.6 |
| 40.0 | -1.731 | 0.60597 | 32.806 | 26.396 | 1438.7 |
| 42.5 | -1.728 | 0.60640 | 32.827 | 26.412 | 1438.8 |
| 45.0 | -1.725 | 0.60677 | 32.844 | 26.426 | 1438.9 |
| 47.5 | -1.727 | 0.60711 | 32.865 | 26.444 | 1438.9 |
| 50.0 | -1.731 | 0.60706 | 32.865 | 26.444 | 1438.9 |
| 55.0 | -1.730 | 0.60753 | 32.889 | 26.463 | 1439.1 |
| 60.0 | -1.728 | 0.60771 | 32.895 | 26.468 | 1439.1 |
| 65.0 | -1.729 | 0.60782 | 32.899 | 26.471 | 1439.2 |
| 70.0 | -1.731 | 0.60808 | 32.914 | 26.483 | 1439.3 |
| 75.0 | -1.713 | 0.60882 | 32.934 | 26.499 | 1439.5 |
| 80.0 | -1.703 | 0.60922 | 32.944 | 26.507 | 1439.7 |
| 83.1 | -1.706 | 0.60925 | 32.948 | 26.510 | 1439.7 |



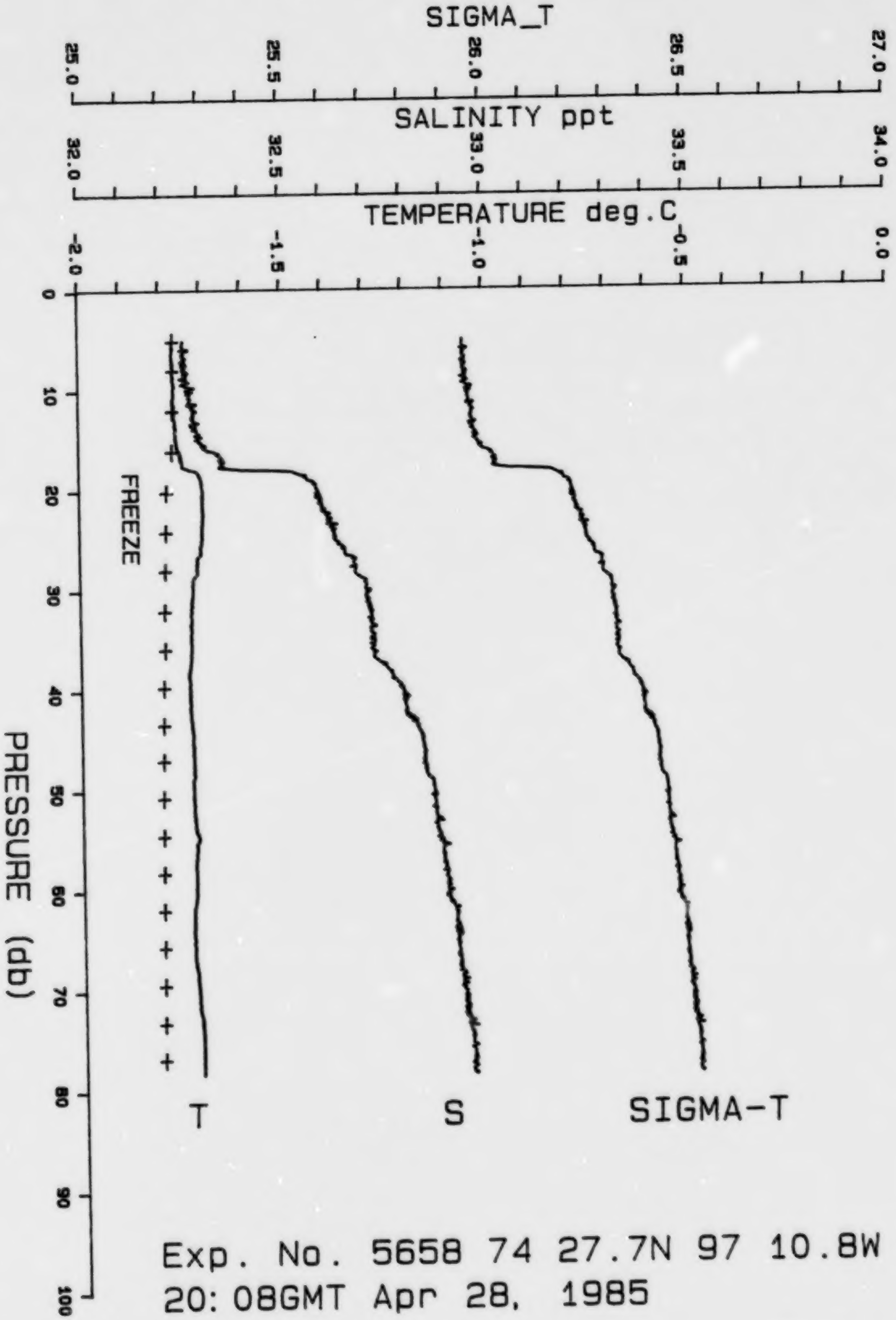
Exp. No. 5657 74 27.7N 97 10.8W
19:02GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5658

Lat.  75 27.7N    Lon.  97 10.8W    DDMMYY  28/ 4/85

Ice Thickness  1.5m    Water Depth  114m    G.M.T.  2008

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.769 | 0.59573 | 32.260 | 25.952 | 1437.2 |
| 6.0 | -1.768 | 0.59588 | 32.267 | 25.958 | 1437.2 |
| 7.0 | -1.766 | 0.59577 | 32.258 | 25.951 | 1437.2 |
| 8.0 | -1.769 | 0.59582 | 32.264 | 25.955 | 1437.3 |
| 9.0 | -1.765 | 0.59590 | 32.264 | 25.956 | 1437.3 |
| 10.0 | -1.764 | 0.59608 | 32.273 | 25.963 | 1437.3 |
| 11.0 | -1.768 | 0.59605 | 32.275 | 25.965 | 1437.3 |
| 12.0 | -1.764 | 0.59641 | 32.291 | 25.978 | 1437.4 |
| 13.0 | -1.761 | 0.59642 | 32.287 | 25.975 | 1437.4 |
| 14.0 | -1.760 | 0.59649 | 32.291 | 25.977 | 1437.4 |
| 15.0 | -1.759 | 0.59662 | 32.296 | 25.982 | 1437.5 |
| 16.0 | -1.753 | 0.59711 | 32.318 | 25.999 | 1437.5 |
| 17.0 | -1.749 | 0.59782 | 32.356 | 26.030 | 1437.6 |
| 18.0 | -1.714 | 0.59989 | 32.440 | 26.097 | 1437.9 |
| 19.0 | -1.698 | 0.60233 | 32.567 | 26.201 | 1438.2 |
| 20.0 | -1.695 | 0.60278 | 32.589 | 26.218 | 1438.2 |
| 21.0 | -1.697 | 0.60284 | 32.595 | 26.223 | 1438.3 |
| 22.0 | -1.698 | 0.60299 | 32.603 | 26.230 | 1438.3 |
| 23.0 | -1.696 | 0.60325 | 32.617 | 26.241 | 1438.3 |
| 24.0 | -1.697 | 0.60338 | 32.625 | 26.247 | 1438.3 |
| 25.0 | -1.699 | 0.60349 | 32.633 | 26.254 | 1438.4 |
| 26.0 | -1.701 | 0.60385 | 32.656 | 26.273 | 1438.4 |
| 27.0 | -1.711 | 0.60405 | 32.678 | 26.291 | 1438.4 |
| 28.0 | -1.710 | 0.60408 | 32.679 | 26.291 | 1438.4 |
| 29.0 | -1.723 | 0.60432 | 32.706 | 26.314 | 1438.4 |
| 30.0 | -1.722 | 0.60436 | 32.708 | 26.315 | 1438.4 |
| 31.0 | -1.725 | 0.60437 | 32.710 | 26.317 | 1438.4 |
| 32.0 | -1.726 | 0.60449 | 32.718 | 26.324 | 1438.5 |
| 33.0 | -1.726 | 0.60449 | 32.717 | 26.323 | 1438.5 |
| 34.0 | -1.726 | 0.60452 | 32.719 | 26.325 | 1438.5 |
| 35.0 | -1.727 | 0.60460 | 32.723 | 26.328 | 1438.5 |
| 37.5 | -1.731 | 0.60504 | 32.752 | 26.352 | 1438.6 |
| 40.0 | -1.731 | 0.60580 | 32.797 | 26.388 | 1438.7 |
| 42.5 | -1.730 | 0.60597 | 32.804 | 26.394 | 1438.7 |
| 45.0 | -1.725 | 0.60670 | 32.841 | 26.424 | 1438.8 |
| 47.5 | -1.726 | 0.60689 | 32.851 | 26.432 | 1438.9 |
| 50.0 | -1.726 | 0.60721 | 32.868 | 26.446 | 1439.0 |
| 55.0 | -1.716 | 0.60769 | 32.883 | 26.458 | 1439.1 |
| 60.0 | -1.724 | 0.60787 | 32.900 | 26.472 | 1439.2 |
| 65.0 | -1.731 | 0.60818 | 32.923 | 26.490 | 1439.3 |
| 70.0 | -1.720 | 0.60877 | 32.943 | 26.506 | 1439.4 |
| 75.0 | -1.711 | 0.60923 | 32.956 | 26.517 | 1439.6 |
| 78.3 | -1.712 | 0.60931 | 32.961 | 26.521 | 1439.6 |



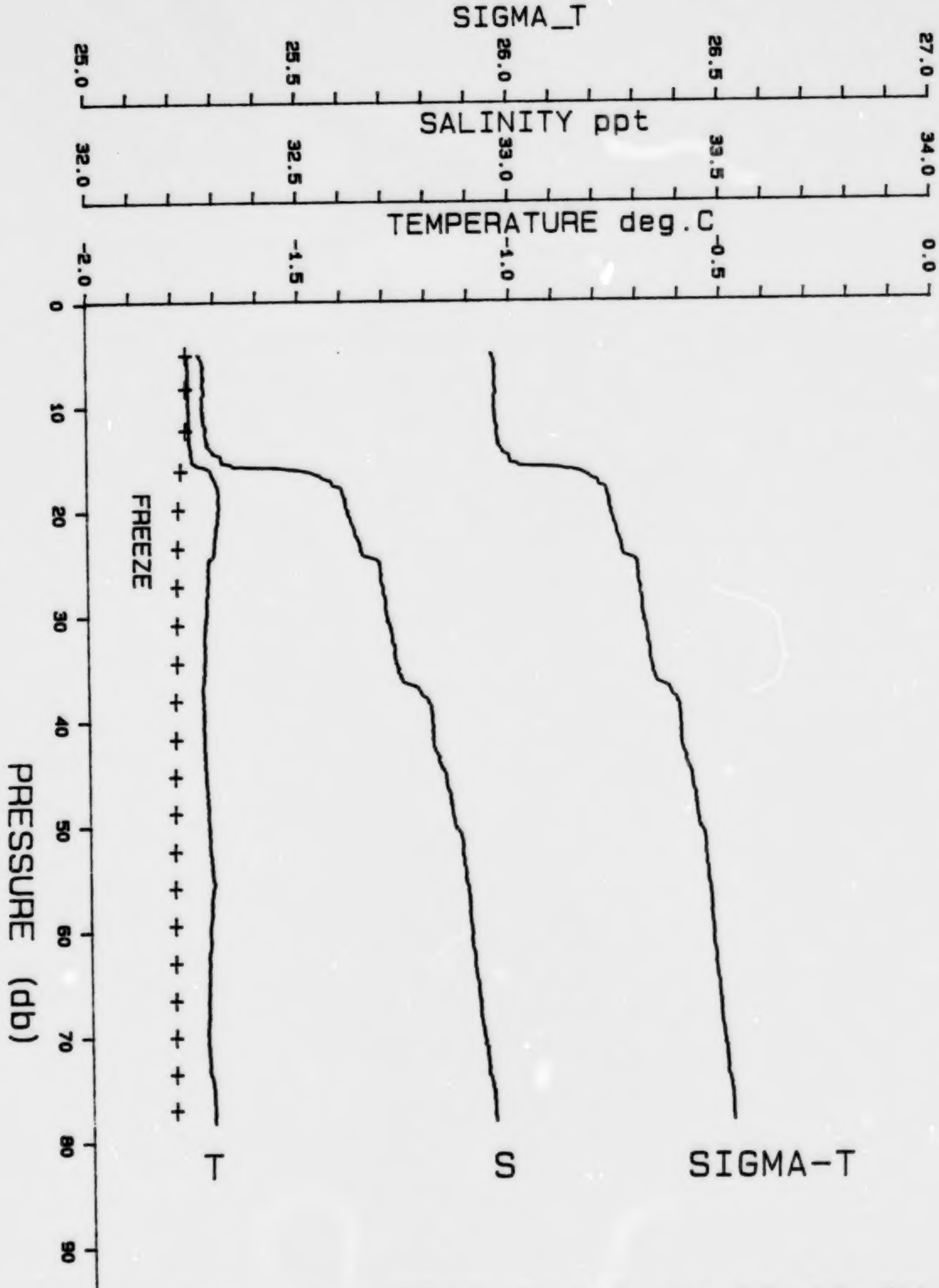
Exp. No. 5658 74 27.7N 97 10.8W
20: 08GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5659

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 2037

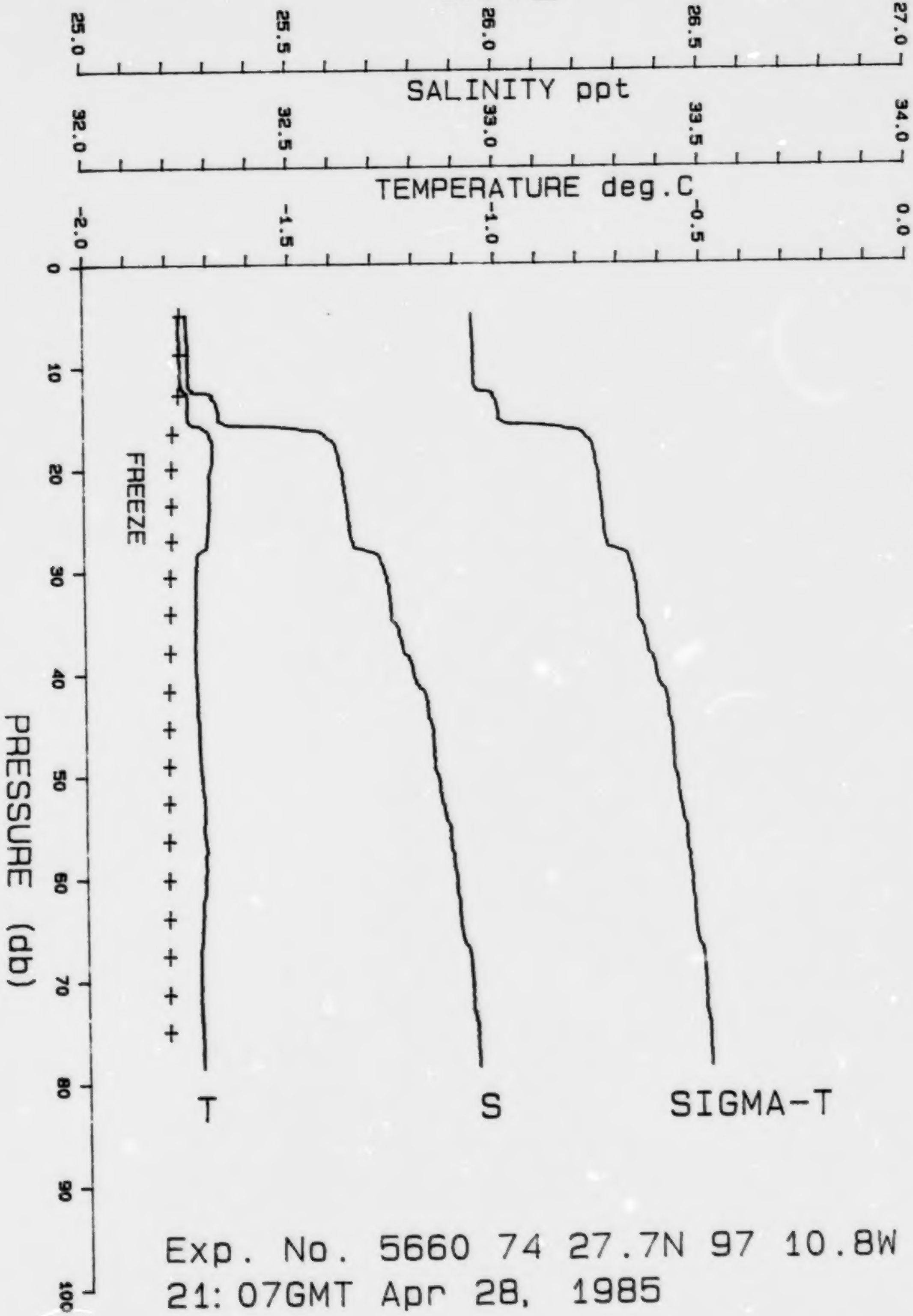
| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.765 | 0.59582 | 32.262 | 25.954 | 1437.2 |
| 6.0 | -1.764 | 0.59608 | 32.276 | 25.965 | 1437.3 |
| 7.0 | -1.761 | 0.59610 | 32.272 | 25.963 | 1437.3 |
| 8.0 | -1.760 | 0.59611 | 32.272 | 25.962 | 1437.3 |
| 9.0 | -1.761 | 0.59609 | 32.270 | 25.961 | 1437.3 |
| 10.0 | -1.762 | 0.59610 | 32.272 | 25.962 | 1437.3 |
| 11.0 | -1.760 | 0.59617 | 32.273 | 25.963 | 1437.4 |
| 12.0 | -1.763 | 0.59627 | 32.281 | 25.970 | 1437.4 |
| 13.0 | -1.761 | 0.59631 | 32.281 | 25.969 | 1437.4 |
| 14.0 | -1.755 | 0.59658 | 32.290 | 25.977 | 1437.5 |
| 15.0 | -1.753 | 0.59706 | 32.316 | 25.997 | 1437.5 |
| 16.0 | -1.711 | 0.60060 | 32.480 | 26.130 | 1438.0 |
| 17.0 | -1.700 | 0.60226 | 32.565 | 26.199 | 1438.1 |
| 18.0 | -1.692 | 0.60300 | 32.600 | 26.228 | 1438.2 |
| 19.0 | -1.691 | 0.60311 | 32.605 | 26.232 | 1438.3 |
| 20.0 | -1.694 | 0.60324 | 32.616 | 26.240 | 1438.3 |
| 21.0 | -1.694 | 0.60334 | 32.621 | 26.244 | 1438.3 |
| 22.0 | -1.698 | 0.60342 | 32.630 | 26.251 | 1438.3 |
| 23.0 | -1.701 | 0.60356 | 32.641 | 26.261 | 1438.3 |
| 24.0 | -1.704 | 0.60363 | 32.647 | 26.266 | 1438.3 |
| 25.0 | -1.716 | 0.60408 | 32.686 | 26.298 | 1438.4 |
| 26.0 | -1.719 | 0.60412 | 32.692 | 26.302 | 1438.4 |
| 27.0 | -1.718 | 0.60414 | 32.692 | 26.302 | 1438.4 |
| 28.0 | -1.720 | 0.60422 | 32.697 | 26.307 | 1438.4 |
| 29.0 | -1.721 | 0.60426 | 32.700 | 26.310 | 1438.4 |
| 30.0 | -1.724 | 0.60430 | 32.706 | 26.314 | 1438.4 |
| 31.0 | -1.725 | 0.60440 | 32.712 | 26.319 | 1438.4 |
| 32.0 | -1.728 | 0.60444 | 32.717 | 26.323 | 1438.5 |
| 33.0 | -1.726 | 0.60456 | 32.722 | 26.327 | 1438.5 |
| 34.0 | -1.726 | 0.60457 | 32.722 | 26.327 | 1438.5 |
| 35.0 | -1.729 | 0.60468 | 32.730 | 26.334 | 1438.5 |
| 37.5 | -1.732 | 0.60558 | 32.786 | 26.379 | 1438.6 |
| 40.0 | -1.731 | 0.60602 | 32.809 | 26.398 | 1438.7 |
| 42.5 | -1.730 | 0.60611 | 32.813 | 26.401 | 1438.7 |
| 45.0 | -1.728 | 0.60666 | 32.841 | 26.424 | 1438.8 |
| 47.5 | -1.723 | 0.60694 | 32.851 | 26.432 | 1438.9 |
| 50.0 | -1.720 | 0.60719 | 32.861 | 26.440 | 1439.0 |
| 55.0 | -1.712 | 0.60781 | 32.886 | 26.460 | 1439.1 |
| 60.0 | -1.720 | 0.60791 | 32.897 | 26.470 | 1439.2 |
| 65.0 | -1.724 | 0.60811 | 32.911 | 26.480 | 1439.3 |
| 70.0 | -1.728 | 0.60833 | 32.924 | 26.492 | 1439.4 |
| 75.0 | -1.715 | 0.60894 | 32.944 | 26.508 | 1439.5 |
| 78.2 | -1.713 | 0.60911 | 32.950 | 26.512 | 1439.6 |



Exp. No. 5659 74 27.7N 97 10.8W
20: 37GMT Apr 28, 1985

| | | |
|---|---|---|
| Ice Keel '85 Experiment | Barrow Strait | Exp. No. 5660 |
| Lat. 75 27.7N | Lon. 97 10.8W | DDMMYY 28/ 4/85 |
| Ice Thickness 1.5m | Water Depth 114m | G.M.T. 2107 |

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 4.9 | -1.770 | 0.59552 | 32.249 | 25.944 | 1437.2 |
| 5.0 | -1.770 | 0.59554 | 32.250 | 25.945 | 1437.2 |
| 6.0 | -1.768 | 0.59558 | 32.249 | 25.944 | 1437.2 |
| 7.0 | -1.769 | 0.59560 | 32.252 | 25.946 | 1437.2 |
| 8.0 | -1.769 | 0.59569 | 32.256 | 25.949 | 1437.2 |
| 9.0 | -1.768 | 0.59570 | 32.255 | 25.948 | 1437.3 |
| 10.0 | -1.764 | 0.59575 | 32.253 | 25.947 | 1437.3 |
| 11.0 | -1.764 | 0.59576 | 32.253 | 25.947 | 1437.3 |
| 12.0 | -1.762 | 0.59587 | 32.257 | 25.950 | 1437.3 |
| 13.0 | -1.748 | 0.59710 | 32.314 | 25.996 | 1437.5 |
| 14.0 | -1.748 | 0.59730 | 32.325 | 26.005 | 1437.5 |
| 15.0 | -1.747 | 0.59737 | 32.328 | 26.007 | 1437.6 |
| 16.0 | -1.708 | 0.60110 | 32.507 | 26.152 | 1438.0 |
| 17.0 | -1.691 | 0.60283 | 32.590 | 26.219 | 1438.2 |
| 18.0 | -1.688 | 0.60326 | 32.612 | 26.237 | 1438.3 |
| 19.0 | -1.689 | 0.60338 | 32.619 | 26.243 | 1438.3 |
| 20.0 | -1.694 | 0.60342 | 32.626 | 26.248 | 1438.3 |
| 21.0 | -1.696 | 0.60341 | 32.628 | 26.250 | 1438.3 |
| 22.0 | -1.697 | 0.60349 | 32.633 | 26.254 | 1438.3 |
| 23.0 | -1.695 | 0.60356 | 32.634 | 26.255 | 1438.4 |
| 24.0 | -1.697 | 0.60362 | 32.639 | 26.259 | 1438.4 |
| 25.0 | -1.699 | 0.60363 | 32.641 | 26.261 | 1438.4 |
| 26.0 | -1.700 | 0.60365 | 32.643 | 26.263 | 1438.4 |
| 27.0 | -1.702 | 0.60372 | 32.649 | 26.267 | 1438.4 |
| 28.0 | -1.718 | 0.60401 | 32.683 | 26.295 | 1438.4 |
| 29.0 | -1.726 | 0.60444 | 32.717 | 26.323 | 1438.4 |
| 30.0 | -1.729 | 0.60456 | 32.727 | 26.331 | 1438.4 |
| 31.0 | -1.729 | 0.60464 | 32.731 | 26.334 | 1438.5 |
| 32.0 | -1.729 | 0.60475 | 32.737 | 26.339 | 1438.5 |
| 33.0 | -1.730 | 0.60480 | 32.740 | 26.342 | 1438.5 |
| 34.0 | -1.732 | 0.60483 | 32.743 | 26.345 | 1438.5 |
| 35.0 | -1.732 | 0.60493 | 32.748 | 26.349 | 1438.5 |
| 37.5 | -1.734 | 0.60528 | 32.771 | 26.367 | 1438.6 |
| 40.0 | -1.733 | 0.60576 | 32.797 | 26.388 | 1438.7 |
| 42.5 | -1.728 | 0.60636 | 32.825 | 26.411 | 1438.8 |
| 45.0 | -1.726 | 0.60664 | 32.838 | 26.421 | 1438.8 |
| 47.5 | -1.724 | 0.60678 | 32.842 | 26.425 | 1438.9 |
| 50.0 | -1.721 | 0.60706 | 32.854 | 26.434 | 1439.0 |
| 55.0 | -1.716 | 0.60766 | 32.881 | 26.456 | 1439.1 |
| 60.0 | -1.714 | 0.60801 | 32.897 | 26.469 | 1439.2 |
| 65.0 | -1.723 | 0.60806 | 32.907 | 26.478 | 1439.3 |
| 70.0 | -1.727 | 0.60846 | 32.932 | 26.498 | 1439.4 |
| 75.0 | -1.724 | 0.60874 | 32.942 | 26.506 | 1439.5 |
| 78.4 | -1.725 | 0.60886 | 32.948 | 26.511 | 1439.5 |



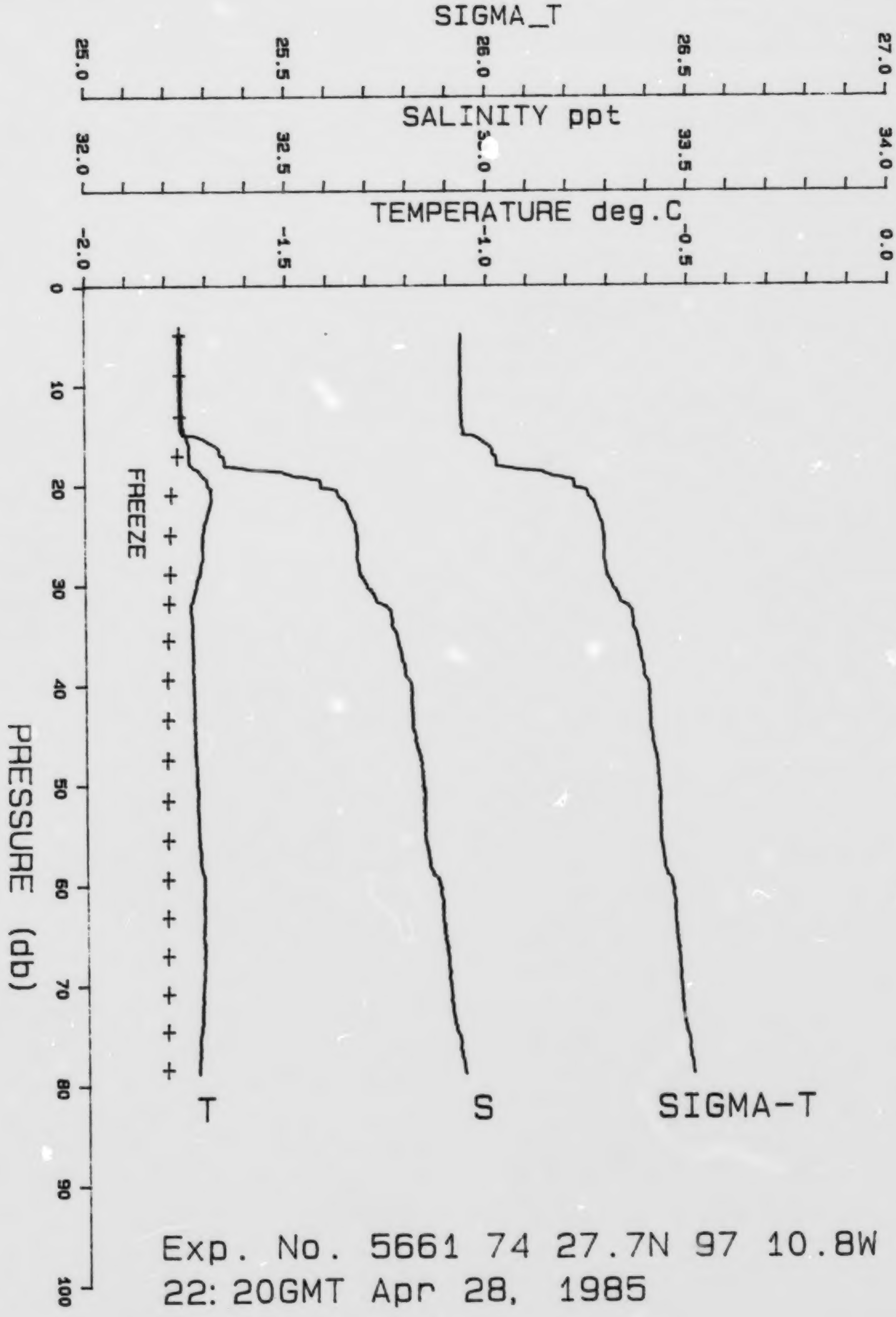
Exp. No. 5660 74 27.7N 97 10.8W
21: 07GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5661

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 28/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 2220

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 4.8 | -1.768 | 0.59539 | 32.240 | 25.936 | 1437.2 |
| 5.0 | -1.768 | 0.59539 | 32.239 | 25.936 | 1437.2 |
| 6.0 | -1.766 | 0.59540 | 32.237 | 25.934 | 1437.2 |
| 7.0 | -1.765 | 0.59541 | 32.236 | 25.933 | 1437.2 |
| 8.0 | -1.765 | 0.59543 | 32.237 | 25.934 | 1437.2 |
| 9.0 | -1.765 | 0.59545 | 32.237 | 25.934 | 1437.3 |
| 10.0 | -1.766 | 0.59544 | 32.238 | 25.934 | 1437.3 |
| 11.0 | -1.766 | 0.59547 | 32.238 | 25.935 | 1437.3 |
| 12.0 | -1.764 | 0.59549 | 32.236 | 25.933 | 1437.3 |
| 13.0 | -1.763 | 0.59551 | 32.236 | 25.933 | 1437.3 |
| 14.0 | -1.762 | 0.59559 | 32.240 | 25.936 | 1437.4 |
| 15.0 | -1.748 | 0.59633 | 32.268 | 25.958 | 1437.5 |
| 16.0 | -1.742 | 0.59739 | 32.323 | 26.003 | 1437.6 |
| 17.0 | -1.741 | 0.59765 | 32.337 | 26.014 | 1437.6 |
| 18.0 | -1.735 | 0.59792 | 32.346 | 26.022 | 1437.7 |
| 19.0 | -1.708 | 0.60128 | 32.516 | 26.159 | 1438.1 |
| 20.0 | -1.698 | 0.60267 | 32.586 | 26.216 | 1438.2 |
| 21.0 | -1.687 | 0.60357 | 32.628 | 26.250 | 1438.4 |
| 22.0 | -1.691 | 0.60390 | 32.650 | 26.268 | 1438.4 |
| 23.0 | -1.698 | 0.60394 | 32.659 | 26.276 | 1438.4 |
| 24.0 | -1.705 | 0.60399 | 32.670 | 26.284 | 1438.4 |
| 25.0 | -1.710 | 0.60401 | 32.676 | 26.289 | 1438.4 |
| 26.0 | -1.709 | 0.60400 | 32.674 | 26.288 | 1438.4 |
| 27.0 | -1.708 | 0.60403 | 32.673 | 26.287 | 1438.4 |
| 28.0 | -1.713 | 0.60402 | 32.679 | 26.292 | 1438.4 |
| 29.0 | -1.715 | 0.60403 | 32.680 | 26.293 | 1438.4 |
| 30.0 | -1.724 | 0.60418 | 32.699 | 26.308 | 1438.4 |
| 31.0 | -1.731 | 0.60433 | 32.715 | 26.322 | 1438.4 |
| 32.0 | -1.740 | 0.60470 | 32.746 | 26.347 | 1438.4 |
| 33.0 | -1.737 | 0.60498 | 32.758 | 26.357 | 1438.5 |
| 34.0 | -1.734 | 0.60507 | 32.760 | 26.358 | 1438.5 |
| 35.0 | -1.737 | 0.60525 | 32.774 | 26.369 | 1438.5 |
| 37.5 | -1.733 | 0.60553 | 32.785 | 26.378 | 1438.6 |
| 40.0 | -1.733 | 0.60594 | 32.807 | 26.396 | 1438.7 |
| 42.5 | -1.730 | 0.60603 | 32.808 | 26.397 | 1438.7 |
| 45.0 | -1.730 | 0.60622 | 32.817 | 26.405 | 1438.8 |
| 47.5 | -1.729 | 0.60649 | 32.831 | 26.416 | 1438.9 |
| 50.0 | -1.728 | 0.60664 | 32.837 | 26.420 | 1438.9 |
| 55.0 | -1.722 | 0.60684 | 32.839 | 26.422 | 1439.0 |
| 60.0 | -1.711 | 0.60774 | 32.878 | 26.453 | 1439.2 |
| 65.0 | -1.715 | 0.60790 | 32.888 | 26.462 | 1439.3 |
| 70.0 | -1.714 | 0.60814 | 32.898 | 26.470 | 1439.4 |
| 75.0 | -1.724 | 0.60838 | 32.921 | 26.489 | 1439.4 |
| 78.8 | -1.727 | 0.60863 | 32.937 | 26.502 | 1439.5 |



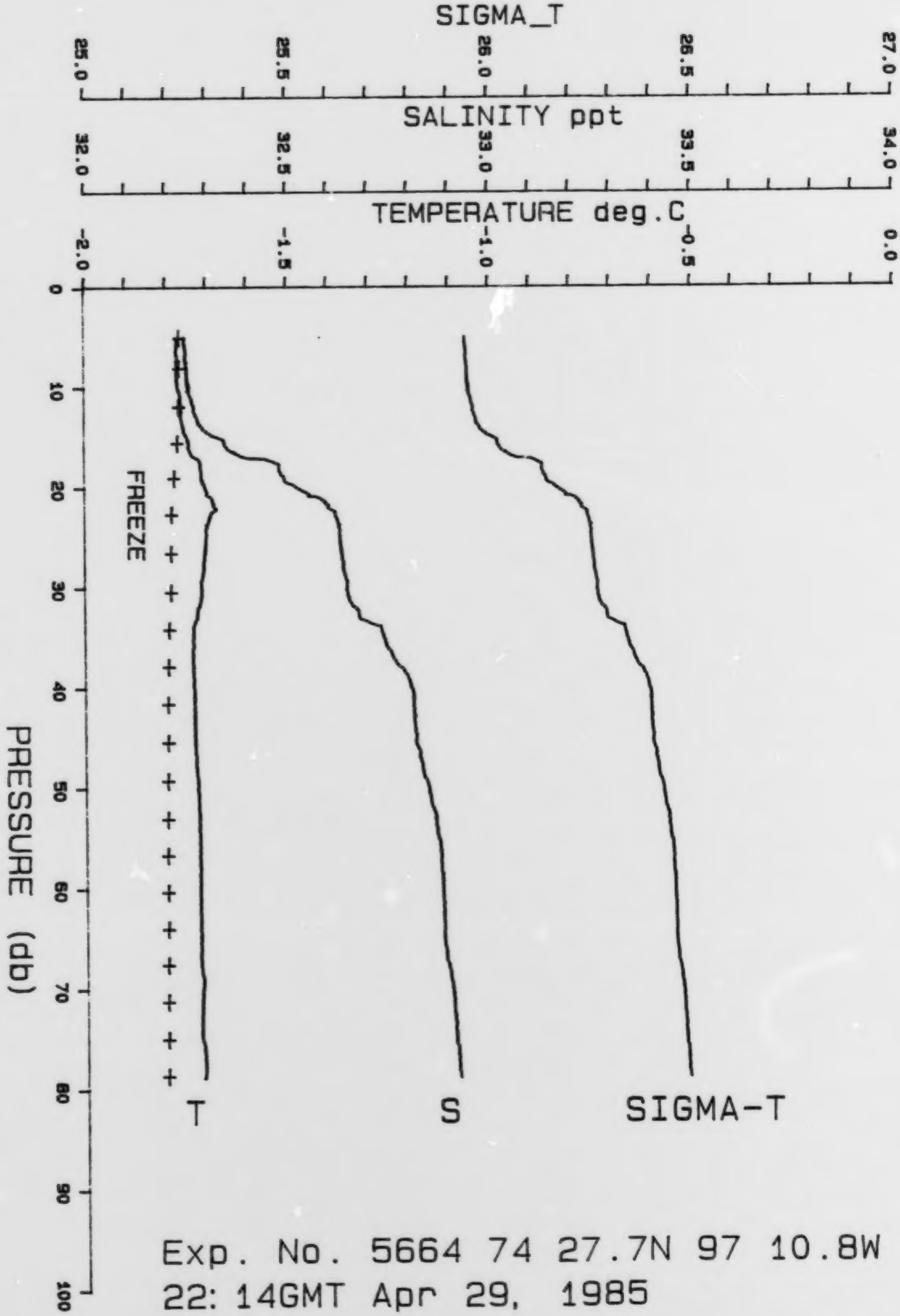
Exp. No. 5661 74 27.7N 97 10.8W
22: 20GMT Apr 28, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5664

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 29/ 4/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 2214

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.773 | 0.59543 | 32.246 | 25.942 | 1437.2 |
| 6.0 | -1.773 | 0.59548 | 32.249 | 25.944 | 1437.2 |
| 7.0 | -1.771 | 0.59551 | 32.248 | 25.943 | 1437.2 |
| 8.0 | -1.774 | 0.59557 | 32.254 | 25.948 | 1437.2 |
| 9.0 | -1.772 | 0.59561 | 32.255 | 25.948 | 1437.2 |
| 10.0 | -1.770 | 0.59571 | 32.257 | 25.950 | 1437.3 |
| 11.0 | -1.763 | 0.59596 | 32.264 | 25.956 | 1437.3 |
| 12.0 | -1.763 | 0.59610 | 32.271 | 25.961 | 1437.4 |
| 13.0 | -1.762 | 0.59625 | 32.279 | 25.968 | 1437.4 |
| 14.0 | -1.757 | 0.59657 | 32.292 | 25.978 | 1437.4 |
| 15.0 | -1.747 | 0.59743 | 32.331 | 26.010 | 1437.6 |
| 16.0 | -1.743 | 0.59785 | 32.352 | 26.027 | 1437.6 |
| 17.0 | -1.724 | 0.59901 | 32.399 | 26.065 | 1437.8 |
| 18.0 | -1.714 | 0.60058 | 32.481 | 26.131 | 1438.0 |
| 19.0 | -1.712 | 0.60082 | 32.492 | 26.140 | 1438.0 |
| 20.0 | -1.702 | 0.60154 | 32.524 | 26.165 | 1438.1 |
| 21.0 | -1.687 | 0.60278 | 32.580 | 26.211 | 1438.3 |
| 22.0 | -1.677 | 0.60333 | 32.601 | 26.228 | 1438.4 |
| 23.0 | -1.692 | 0.60342 | 32.623 | 26.246 | 1438.4 |
| 24.0 | -1.700 | 0.60340 | 32.629 | 26.251 | 1438.3 |
| 25.0 | -1.701 | 0.60341 | 32.630 | 26.252 | 1438.4 |
| 26.0 | -1.703 | 0.60344 | 32.634 | 26.255 | 1438.4 |
| 27.0 | -1.707 | 0.60344 | 32.637 | 26.258 | 1438.4 |
| 28.0 | -1.706 | 0.60346 | 32.638 | 26.258 | 1438.4 |
| 29.0 | -1.710 | 0.60351 | 32.643 | 26.263 | 1438.4 |
| 30.0 | -1.712 | 0.60354 | 32.647 | 26.266 | 1438.4 |
| 31.0 | -1.714 | 0.60359 | 32.652 | 26.270 | 1438.4 |
| 32.0 | -1.723 | 0.60376 | 32.672 | 26.286 | 1438.4 |
| 33.0 | -1.724 | 0.60386 | 32.678 | 26.291 | 1438.4 |
| 34.0 | -1.733 | 0.60459 | 32.730 | 26.334 | 1438.5 |
| 35.0 | -1.733 | 0.60471 | 32.737 | 26.339 | 1438.5 |
| 37.5 | -1.734 | 0.60524 | 32.767 | 26.364 | 1438.6 |
| 40.0 | -1.731 | 0.60590 | 32.802 | 26.393 | 1438.7 |
| 42.5 | -1.731 | 0.60606 | 32.810 | 26.399 | 1438.7 |
| 45.0 | -1.732 | 0.60617 | 32.816 | 26.404 | 1438.8 |
| 47.5 | -1.730 | 0.60645 | 32.830 | 26.415 | 1438.8 |
| 50.0 | -1.727 | 0.60684 | 32.847 | 26.429 | 1438.9 |
| 55.0 | -1.720 | 0.60736 | 32.868 | 26.446 | 1439.1 |
| 60.0 | -1.723 | 0.60757 | 32.880 | 26.456 | 1439.2 |
| 65.0 | -1.721 | 0.60768 | 32.882 | 26.457 | 1439.2 |
| 70.0 | -1.718 | 0.60814 | 32.903 | 26.474 | 1439.4 |
| 75.0 | -1.718 | 0.60830 | 32.910 | 26.480 | 1439.5 |
| 78.8 | -1.716 | 0.60858 | 32.921 | 26.489 | 1439.5 |



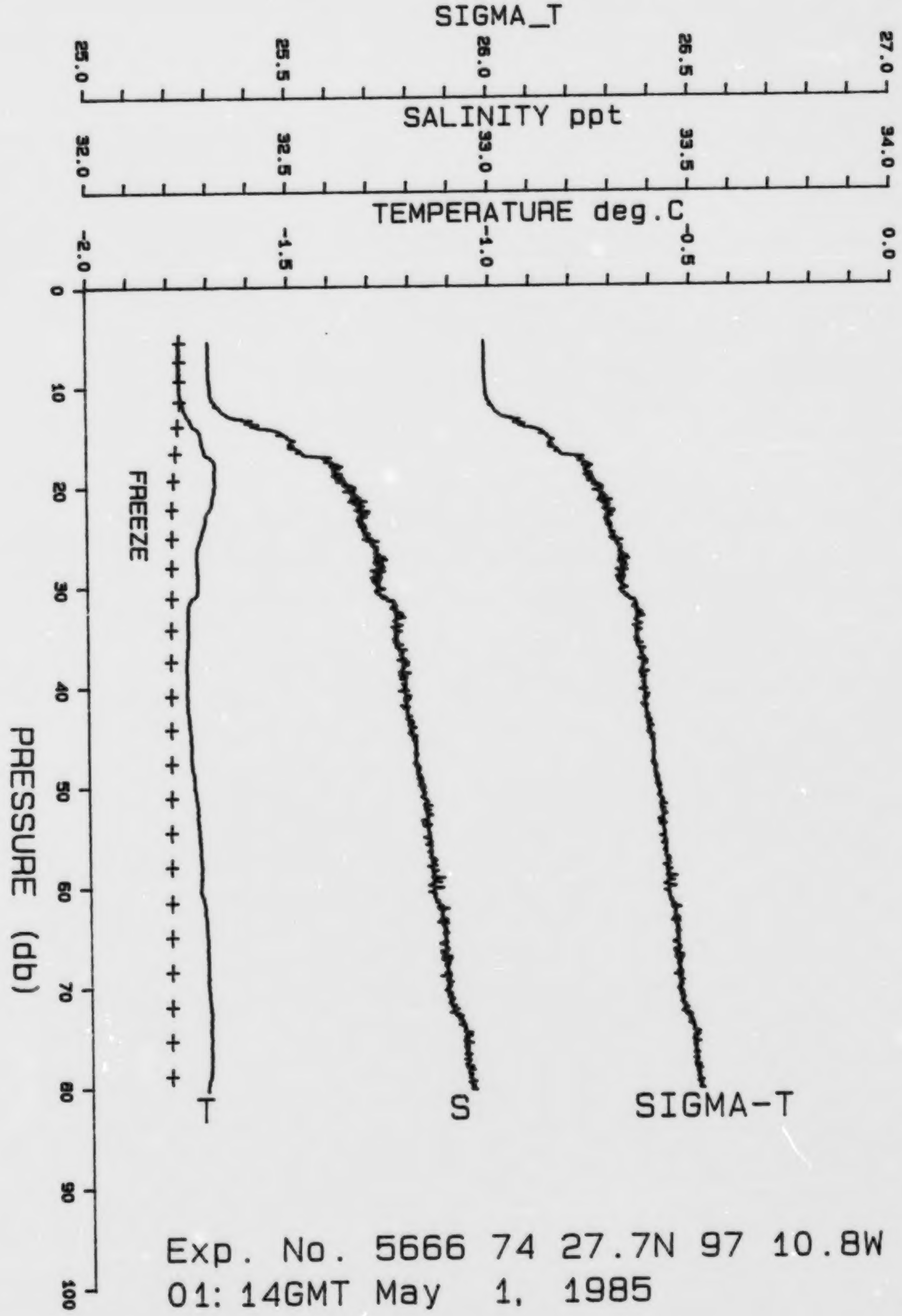
Exp. No. 5664 74 27.7N 97 10.8W
22: 14GMT Apr 29, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5666

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85

Ice Thickness 1.5m Water Depth 114m G.M.T. 0114

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.4 | -1.771 | 0.59638 | 32.302 | 25.986 | 1437.3 |
| 6.0 | -1.773 | 0.59640 | 32.304 | 25.988 | 1437.3 |
| 7.0 | -1.772 | 0.59641 | 32.303 | 25.988 | 1437.3 |
| 8.0 | -1.772 | 0.59642 | 32.302 | 25.987 | 1437.3 |
| 9.0 | -1.772 | 0.59644 | 32.303 | 25.988 | 1437.3 |
| 10.0 | -1.770 | 0.59653 | 32.306 | 25.990 | 1437.3 |
| 11.0 | -1.766 | 0.59667 | 32.310 | 25.993 | 1437.4 |
| 12.0 | -1.760 | 0.59709 | 32.328 | 26.008 | 1437.4 |
| 13.0 | -1.749 | 0.59779 | 32.357 | 26.031 | 1437.6 |
| 14.0 | -1.733 | 0.59916 | 32.420 | 26.082 | 1437.7 |
| 15.0 | -1.717 | 0.60074 | 32.496 | 26.143 | 1437.9 |
| 16.0 | -1.712 | 0.60113 | 32.512 | 26.157 | 1438.0 |
| 17.0 | -1.693 | 0.60248 | 32.571 | 26.204 | 1438.2 |
| 18.0 | -1.682 | 0.60371 | 32.631 | 26.253 | 1438.3 |
| 19.0 | -1.684 | 0.60365 | 32.629 | 26.251 | 1438.3 |
| 20.0 | -1.684 | 0.60388 | 32.643 | 26.262 | 1438.4 |
| 21.0 | -1.689 | 0.60421 | 32.667 | 26.281 | 1438.4 |
| 22.0 | -1.694 | 0.60419 | 32.671 | 26.285 | 1438.4 |
| 23.0 | -1.709 | 0.60392 | 32.671 | 26.286 | 1438.3 |
| 24.0 | -1.711 | 0.60401 | 32.678 | 26.291 | 1438.4 |
| 25.0 | -1.718 | 0.60418 | 32.695 | 26.305 | 1438.4 |
| 26.0 | -1.730 | 0.60430 | 32.714 | 26.321 | 1438.3 |
| 27.0 | -1.730 | 0.60440 | 32.719 | 26.325 | 1438.4 |
| 28.0 | -1.728 | 0.60443 | 32.719 | 26.324 | 1438.4 |
| 29.0 | -1.729 | 0.60439 | 32.717 | 26.323 | 1438.4 |
| 30.0 | -1.728 | 0.60451 | 32.722 | 26.327 | 1438.4 |
| 31.0 | -1.737 | 0.60443 | 32.727 | 26.332 | 1438.4 |
| 32.0 | -1.753 | 0.60459 | 32.754 | 26.353 | 1438.4 |
| 33.0 | -1.753 | 0.60479 | 32.765 | 26.362 | 1438.4 |
| 34.0 | -1.753 | 0.60481 | 32.766 | 26.363 | 1438.4 |
| 35.0 | -1.754 | 0.60480 | 32.765 | 26.363 | 1438.4 |
| 37.5 | -1.756 | 0.60505 | 32.781 | 26.376 | 1438.5 |
| 40.0 | -1.756 | 0.60510 | 32.782 | 26.376 | 1438.5 |
| 42.5 | -1.755 | 0.60525 | 32.789 | 26.382 | 1438.6 |
| 45.0 | -1.748 | 0.60575 | 32.810 | 26.399 | 1438.7 |
| 47.5 | -1.747 | 0.60582 | 32.810 | 26.399 | 1438.7 |
| 50.0 | -1.741 | 0.60618 | 32.824 | 26.411 | 1438.8 |
| 55.0 | -1.728 | 0.60675 | 32.840 | 26.423 | 1439.0 |
| 60.0 | -1.728 | 0.60700 | 32.852 | 26.433 | 1439.1 |
| 65.0 | -1.714 | 0.60779 | 32.880 | 26.455 | 1439.3 |
| 70.0 | -1.712 | 0.60789 | 32.880 | 26.456 | 1439.4 |
| 75.0 | -1.705 | 0.60880 | 32.924 | 26.491 | 1439.5 |
| 80.0 | -1.715 | 0.60902 | 32.946 | 26.509 | 1439.6 |
| 80.3 | -1.715 | 0.60912 | 32.952 | 26.514 | 1439.6 |



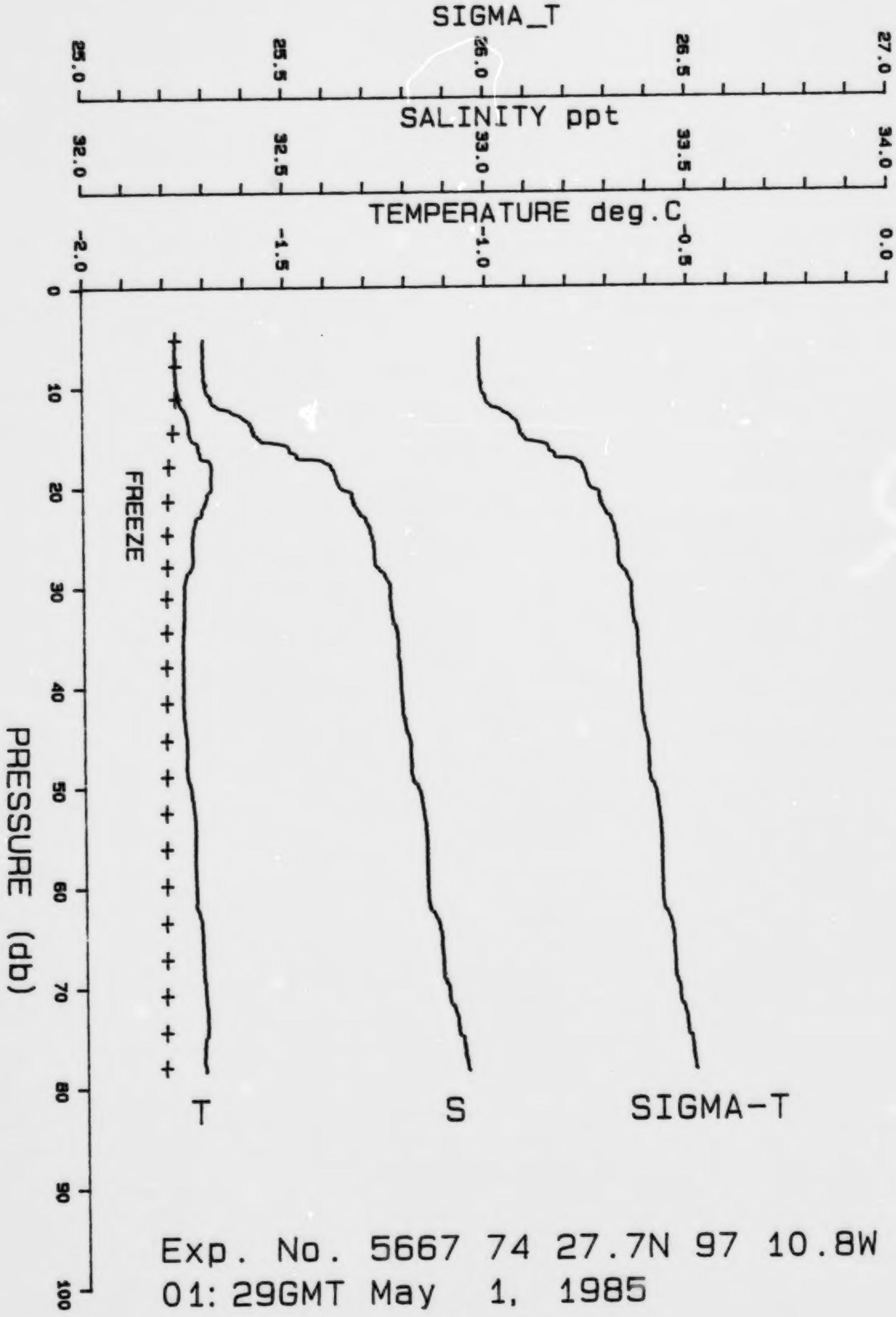
Exp. No. 5666 74 27.7N 97 10.8W
01: 14GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5667

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 0129

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.1 | -1.771 | 0.59636 | 32.300 | 25.985 | 1437.2 |
| 6.0 | -1.770 | 0.59635 | 32.298 | 25.984 | 1437.3 |
| 7.0 | -1.771 | 0.59637 | 32.299 | 25.985 | 1437.3 |
| 8.0 | -1.771 | 0.59639 | 32.300 | 25.985 | 1437.3 |
| 9.0 | -1.768 | 0.59643 | 32.299 | 25.984 | 1437.3 |
| 10.0 | -1.766 | 0.59658 | 32.305 | 25.989 | 1437.4 |
| 11.0 | -1.763 | 0.59685 | 32.317 | 25.999 | 1437.4 |
| 12.0 | -1.752 | 0.59741 | 32.337 | 26.015 | 1437.5 |
| 13.0 | -1.742 | 0.59863 | 32.398 | 26.064 | 1437.6 |
| 14.0 | -1.738 | 0.59909 | 32.421 | 26.083 | 1437.7 |
| 15.0 | -1.733 | 0.59942 | 32.434 | 26.093 | 1437.8 |
| 16.0 | -1.714 | 0.60106 | 32.510 | 26.155 | 1438.0 |
| 17.0 | -1.707 | 0.60150 | 32.529 | 26.170 | 1438.1 |
| 18.0 | -1.681 | 0.60346 | 32.615 | 26.239 | 1438.3 |
| 19.0 | -1.682 | 0.60363 | 32.626 | 26.248 | 1438.3 |
| 20.0 | -1.681 | 0.60384 | 32.637 | 26.257 | 1438.4 |
| 21.0 | -1.694 | 0.60410 | 32.666 | 26.281 | 1438.4 |
| 22.0 | -1.704 | 0.60407 | 32.675 | 26.288 | 1438.4 |
| 23.0 | -1.720 | 0.60417 | 32.697 | 26.307 | 1438.3 |
| 24.0 | -1.728 | 0.60425 | 32.711 | 26.318 | 1438.3 |
| 25.0 | -1.729 | 0.60432 | 32.715 | 26.322 | 1438.3 |
| 26.0 | -1.729 | 0.60438 | 32.718 | 26.324 | 1438.4 |
| 27.0 | -1.729 | 0.60443 | 32.721 | 26.326 | 1438.4 |
| 28.0 | -1.733 | 0.60445 | 32.726 | 26.331 | 1438.4 |
| 29.0 | -1.747 | 0.60456 | 32.747 | 26.348 | 1438.4 |
| 30.0 | -1.750 | 0.60469 | 32.758 | 26.357 | 1438.4 |
| 31.0 | -1.751 | 0.60470 | 32.759 | 26.357 | 1438.4 |
| 32.0 | -1.753 | 0.60471 | 32.761 | 26.360 | 1438.4 |
| 33.0 | -1.751 | 0.60480 | 32.763 | 26.361 | 1438.4 |
| 34.0 | -1.754 | 0.60492 | 32.773 | 26.370 | 1438.4 |
| 35.0 | -1.753 | 0.60496 | 32.774 | 26.370 | 1438.5 |
| 37.5 | -1.757 | 0.60505 | 32.782 | 26.376 | 1438.5 |
| 40.0 | -1.754 | 0.60514 | 32.783 | 26.377 | 1438.5 |
| 42.5 | -1.754 | 0.60526 | 32.788 | 26.381 | 1438.6 |
| 45.0 | -1.746 | 0.60568 | 32.803 | 26.393 | 1438.7 |
| 47.5 | -1.747 | 0.60578 | 32.808 | 26.397 | 1438.7 |
| 50.0 | -1.739 | 0.60622 | 32.824 | 26.411 | 1438.8 |
| 55.0 | -1.727 | 0.60684 | 32.844 | 26.427 | 1439.0 |
| 60.0 | -1.725 | 0.60693 | 32.845 | 26.427 | 1439.1 |
| 65.0 | -1.713 | 0.60777 | 32.878 | 26.453 | 1439.3 |
| 70.0 | -1.707 | 0.60825 | 32.897 | 26.469 | 1439.4 |
| 75.0 | -1.707 | 0.60887 | 32.931 | 26.497 | 1439.5 |
| 78.3 | -1.709 | 0.60914 | 32.947 | 26.509 | 1439.6 |



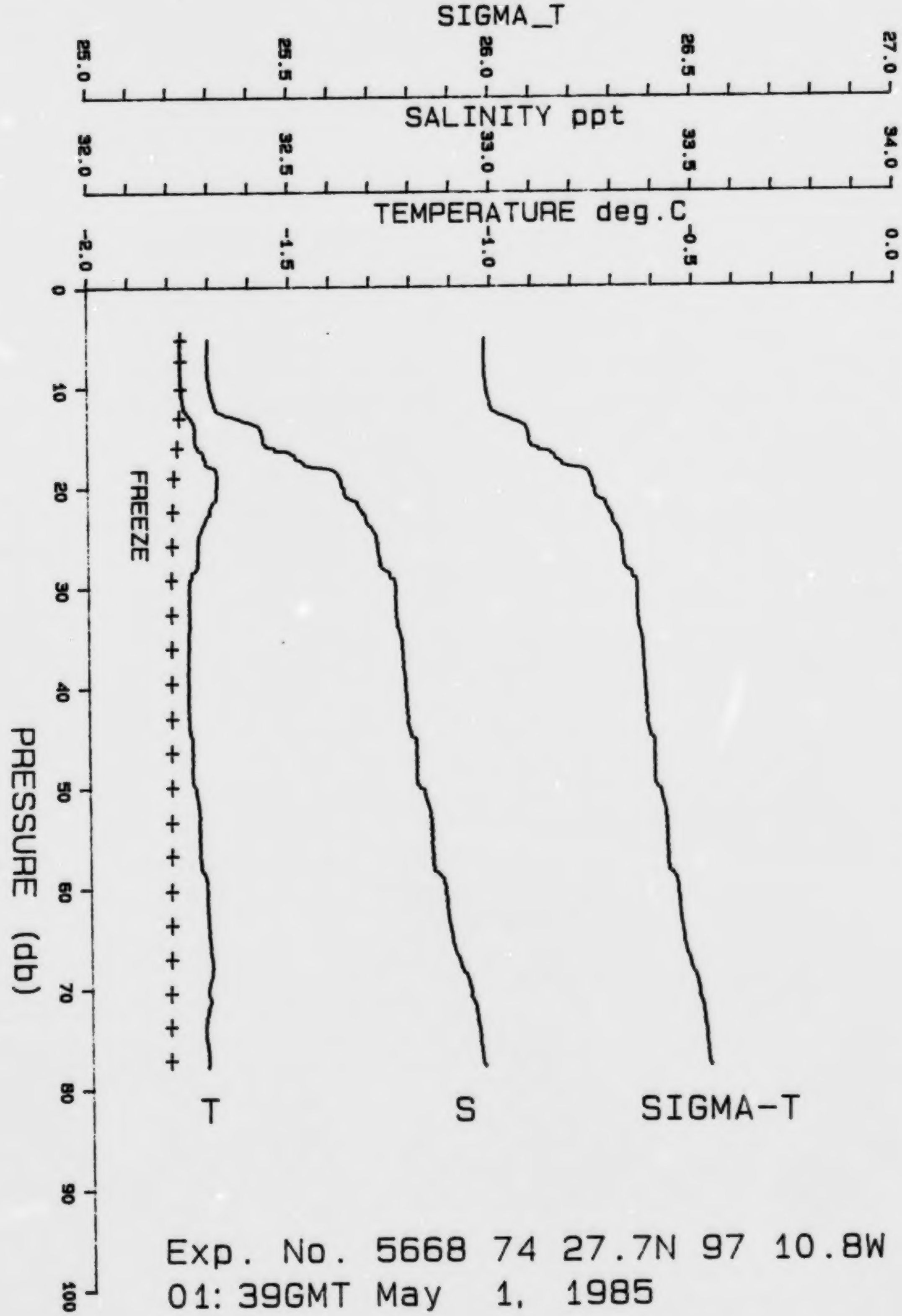
Exp. No. 5667 74 27.7N 97 10.8W
01: 29GMT May 1, 1985

Ice Keel '85 Experiment   Barrow Strait   Exp. No. 5668

Lat. 75 27.7N   Lon. 97 10.8W   DDMMYY 1/ 5/85

Ice Thickness 1.5m   Water Depth 114m   G.M.T. 0139

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.2 | -1.772 | 0.59633 | 32.299 | 25.984 | 1437.2 |
| 6.0 | -1.771 | 0.59634 | 32.298 | 25.983 | 1437.3 |
| 7.0 | -1.771 | 0.59634 | 32.297 | 25.983 | 1437.3 |
| 8.0 | -1.772 | 0.59637 | 32.299 | 25.985 | 1437.3 |
| 9.0 | -1.769 | 0.59640 | 32.298 | 25.983 | 1437.3 |
| 10.0 | -1.768 | 0.59650 | 32.302 | 25.987 | 1437.3 |
| 11.0 | -1.765 | 0.59667 | 32.309 | 25.992 | 1437.4 |
| 12.0 | -1.763 | 0.59687 | 32.318 | 25.999 | 1437.4 |
| 13.0 | -1.745 | 0.59799 | 32.364 | 26.036 | 1437.6 |
| 14.0 | -1.736 | 0.59921 | 32.426 | 26.087 | 1437.7 |
| 15.0 | -1.734 | 0.59938 | 32.433 | 26.092 | 1437.8 |
| 16.0 | -1.726 | 0.59979 | 32.449 | 26.105 | 1437.8 |
| 17.0 | -1.715 | 0.60112 | 32.515 | 26.158 | 1438.0 |
| 18.0 | -1.689 | 0.60235 | 32.558 | 26.193 | 1438.2 |
| 19.0 | -1.679 | 0.60361 | 32.622 | 26.245 | 1438.3 |
| 20.0 | -1.680 | 0.60372 | 32.629 | 26.250 | 1438.4 |
| 21.0 | -1.682 | 0.60386 | 32.639 | 26.259 | 1438.4 |
| 22.0 | -1.699 | 0.60410 | 32.670 | 26.285 | 1438.4 |
| 23.0 | -1.709 | 0.60421 | 32.688 | 26.299 | 1438.4 |
| 24.0 | -1.719 | 0.60424 | 32.700 | 26.309 | 1438.3 |
| 25.0 | -1.727 | 0.60431 | 32.712 | 26.319 | 1438.3 |
| 26.0 | -1.729 | 0.60434 | 32.716 | 26.322 | 1438.4 |
| 27.0 | -1.730 | 0.60442 | 32.721 | 26.326 | 1438.4 |
| 28.0 | -1.732 | 0.60447 | 32.725 | 26.330 | 1438.4 |
| 29.0 | -1.745 | 0.60459 | 32.746 | 26.347 | 1438.4 |
| 30.0 | -1.751 | 0.60469 | 32.759 | 26.358 | 1438.4 |
| 31.0 | -1.751 | 0.60469 | 32.758 | 26.357 | 1438.4 |
| 32.0 | -1.751 | 0.60472 | 32.759 | 26.358 | 1438.4 |
| 33.0 | -1.751 | 0.60474 | 32.760 | 26.358 | 1438.4 |
| 34.0 | -1.751 | 0.60482 | 32.764 | 26.362 | 1438.4 |
| 35.0 | -1.755 | 0.60492 | 32.773 | 26.369 | 1438.5 |
| 37.5 | -1.756 | 0.60501 | 32.779 | 26.374 | 1438.5 |
| 40.0 | -1.753 | 0.60511 | 32.780 | 26.375 | 1438.5 |
| 42.5 | -1.754 | 0.60520 | 32.785 | 26.379 | 1438.6 |
| 45.0 | -1.746 | 0.60568 | 32.803 | 26.393 | 1438.7 |
| 47.5 | -1.746 | 0.60581 | 32.809 | 26.398 | 1438.7 |
| 50.0 | -1.738 | 0.60611 | 32.816 | 26.404 | 1438.8 |
| 55.0 | -1.730 | 0.60675 | 32.842 | 26.425 | 1439.0 |
| 60.0 | -1.715 | 0.60767 | 32.877 | 26.453 | 1439.2 |
| 65.0 | -1.709 | 0.60809 | 32.893 | 26.466 | 1439.3 |
| 70.0 | -1.711 | 0.60880 | 32.935 | 26.500 | 1439.4 |
| 75.0 | -1.719 | 0.60910 | 32.958 | 26.519 | 1439.5 |
| 77.8 | -1.715 | 0.60940 | 32.970 | 26.528 | 1439.6 |



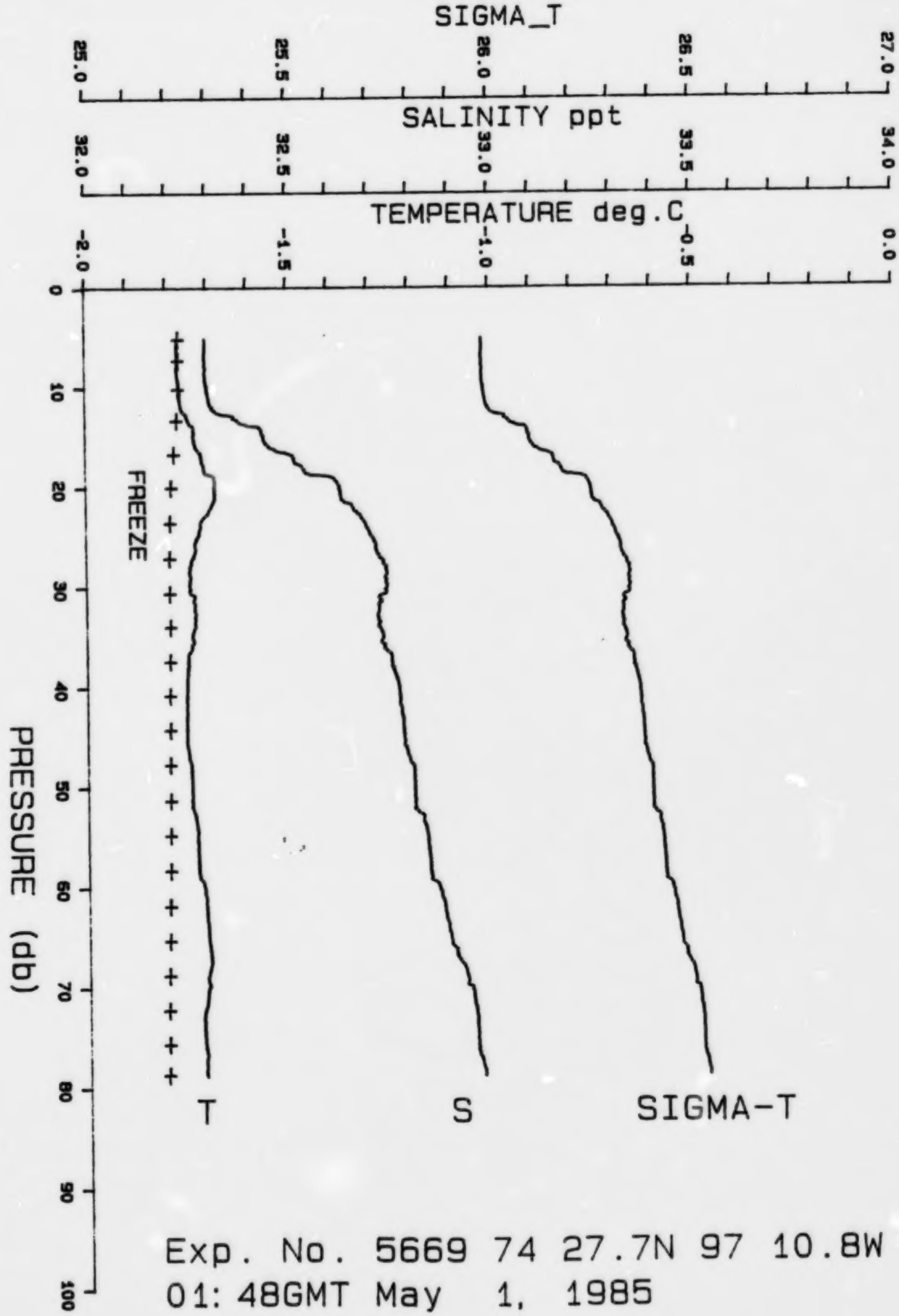
Exp. No. 5668 74 27.7N 97 10.8W
01: 39GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5669

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 0148

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.0 | -1.772 | 0.59631 | 32.298 | 25.983 | 1437.2 |
| 6.0 | -1.773 | 0.59631 | 32.299 | 25.984 | 1437.2 |
| 7.0 | -1.771 | 0.59634 | 32.297 | 25.983 | 1437.3 |
| 8.0 | -1.772 | 0.59633 | 32.298 | 25.983 | 1437.3 |
| 9.0 | -1.770 | 0.59640 | 32.299 | 25.984 | 1437.3 |
| 10.0 | -1.766 | 0.59652 | 32.302 | 25.986 | 1437.3 |
| 11.0 | -1.765 | 0.59664 | 32.306 | 25.990 | 1437.4 |
| 12.0 | -1.761 | 0.59685 | 32.314 | 25.996 | 1437.4 |
| 13.0 | -1.747 | 0.59797 | 32.365 | 26.037 | 1437.6 |
| 14.0 | -1.731 | 0.59941 | 32.432 | 26.092 | 1437.8 |
| 15.0 | -1.731 | 0.59958 | 32.442 | 26.099 | 1437.8 |
| 16.0 | -1.725 | 0.59997 | 32.458 | 26.113 | 1437.9 |
| 17.0 | -1.714 | 0.60119 | 32.518 | 26.161 | 1438.0 |
| 18.0 | -1.706 | 0.60171 | 32.539 | 26.178 | 1438.1 |
| 19.0 | -1.680 | 0.60343 | 32.613 | 26.237 | 1438.3 |
| 20.0 | -1.682 | 0.60372 | 32.631 | 26.252 | 1438.4 |
| 21.0 | -1.680 | 0.60381 | 32.634 | 26.254 | 1438.4 |
| 22.0 | -1.690 | 0.60414 | 32.664 | 26.279 | 1438.4 |
| 23.0 | -1.708 | 0.60413 | 32.682 | 26.295 | 1438.4 |
| 24.0 | -1.716 | 0.60424 | 32.697 | 26.307 | 1438.4 |
| 25.0 | -1.725 | 0.60432 | 32.711 | 26.318 | 1438.3 |
| 26.0 | -1.730 | 0.60438 | 32.719 | 26.325 | 1438.4 |
| 27.0 | -1.735 | 0.60443 | 32.728 | 26.332 | 1438.4 |
| 28.0 | -1.743 | 0.60456 | 32.743 | 26.345 | 1438.4 |
| 29.0 | -1.741 | 0.60456 | 32.741 | 26.343 | 1438.4 |
| 30.0 | -1.743 | 0.60459 | 32.744 | 26.346 | 1438.4 |
| 31.0 | -1.731 | 0.60450 | 32.725 | 26.329 | 1438.4 |
| 32.0 | -1.733 | 0.60452 | 32.727 | 26.331 | 1438.4 |
| 33.0 | -1.731 | 0.60456 | 32.727 | 26.331 | 1438.5 |
| 34.0 | -1.733 | 0.60454 | 32.727 | 26.332 | 1438.5 |
| 35.0 | -1.740 | 0.60460 | 32.737 | 26.340 | 1438.5 |
| 37.5 | -1.751 | 0.60477 | 32.759 | 26.358 | 1438.5 |
| 40.0 | -1.754 | 0.60502 | 32.775 | 26.371 | 1438.5 |
| 42.5 | -1.754 | 0.60511 | 32.779 | 26.374 | 1438.6 |
| 45.0 | -1.754 | 0.60524 | 32.785 | 26.379 | 1438.6 |
| 47.5 | -1.746 | 0.60564 | 32.799 | 26.390 | 1438.7 |
| 50.0 | -1.745 | 0.60589 | 32.811 | 26.400 | 1438.8 |
| 55.0 | -1.732 | 0.60665 | 32.839 | 26.422 | 1439.0 |
| 60.0 | -1.718 | 0.60748 | 32.869 | 26.446 | 1439.2 |
| 65.0 | -1.708 | 0.60814 | 32.895 | 26.467 | 1439.3 |
| 70.0 | -1.709 | 0.60903 | 32.946 | 26.509 | 1439.5 |
| 75.0 | -1.717 | 0.60909 | 32.956 | 26.517 | 1439.5 |
| 78.8 | -1.714 | 0.60949 | 32.973 | 26.531 | 1439.6 |



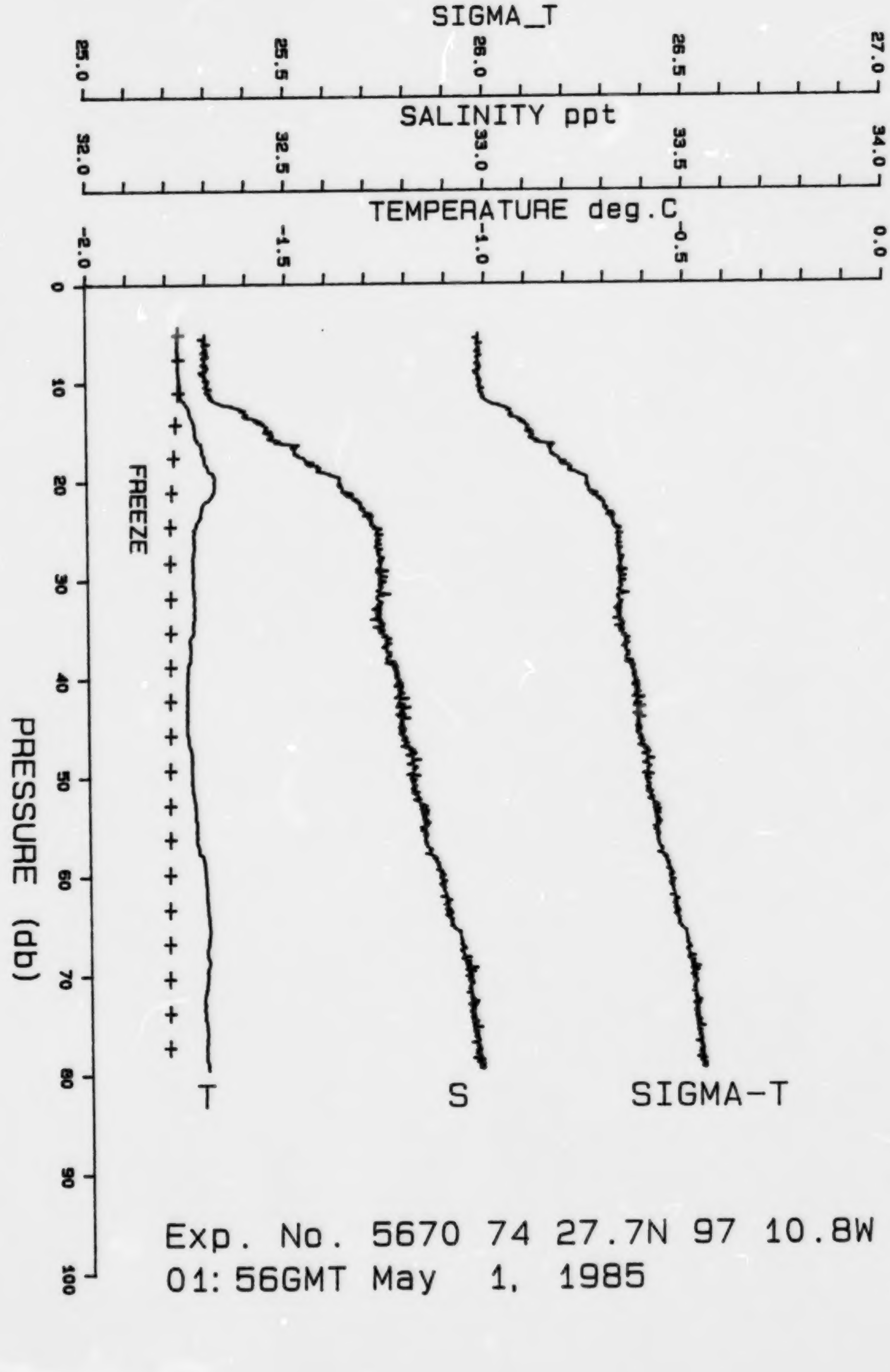
Exp. No. 5669 74 27.7N 97 10.8W
01: 48GMT May 1, 1985

Ice Keel '85 Experiment　Barrow Strait　Exp. No. 5670

Lat. 75 27.7N　Lon. 97 10.8W　DDMMYY 1/ 5/85

Ice Thickness 1.5m　Water Depth 114m　G.M.T. 0156

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.1 | -1.772 | 0.59632 | 32.298 | 25.984 | 1437.2 |
| 6.0 | -1.771 | 0.59635 | 32.299 | 25.984 | 1437.3 |
| 7.0 | -1.770 | 0.59641 | 32.301 | 25.986 | 1437.3 |
| 8.0 | -1.769 | 0.59635 | 32.296 | 25.982 | 1437.3 |
| 9.0 | -1.768 | 0.59633 | 32.293 | 25.979 | 1437.3 |
| 10.0 | -1.767 | 0.59648 | 32.299 | 25.984 | 1437.3 |
| 11.0 | -1.765 | 0.59660 | 32.304 | 25.988 | 1437.4 |
| 12.0 | -1.753 | 0.59726 | 32.330 | 26.009 | 1437.5 |
| 13.0 | -1.741 | 0.59859 | 32.395 | 26.062 | 1437.6 |
| 14.0 | -1.732 | 0.59951 | 32.439 | 26.097 | 1437.8 |
| 15.0 | -1.728 | 0.59987 | 32.456 | 26.111 | 1437.8 |
| 16.0 | -1.721 | 0.60048 | 32.484 | 26.134 | 1437.9 |
| 17.0 | -1.713 | 0.60129 | 32.522 | 26.165 | 1438.0 |
| 18.0 | -1.705 | 0.60194 | 32.552 | 26.188 | 1438.1 |
| 19.0 | -1.693 | 0.60257 | 32.576 | 26.208 | 1438.2 |
| 20.0 | -1.680 | 0.60378 | 32.632 | 26.253 | 1438.4 |
| 21.0 | -1.681 | 0.60387 | 32.638 | 26.258 | 1438.4 |
| 22.0 | -1.701 | 0.60413 | 32.675 | 26.289 | 1438.4 |
| 23.0 | -1.713 | 0.60416 | 32.690 | 26.301 | 1438.3 |
| 24.0 | -1.723 | 0.60432 | 32.709 | 26.317 | 1438.3 |
| 25.0 | -1.733 | 0.60444 | 32.726 | 26.331 | 1438.3 |
| 26.0 | -1.732 | 0.60456 | 32.732 | 26.335 | 1438.4 |
| 27.0 | -1.734 | 0.60445 | 32.727 | 26.331 | 1438.4 |
| 28.0 | -1.738 | 0.60458 | 32.739 | 26.341 | 1438.4 |
| 29.0 | -1.737 | 0.60451 | 32.733 | 26.336 | 1438.4 |
| 30.0 | -1.737 | 0.60450 | 32.732 | 26.335 | 1438.4 |
| 31.0 | -1.734 | 0.60456 | 32.732 | 26.335 | 1438.4 |
| 32.0 | -1.733 | 0.60448 | 32.726 | 26.330 | 1438.4 |
| 33.0 | -1.732 | 0.60457 | 32.728 | 26.332 | 1438.5 |
| 34.0 | -1.735 | 0.60440 | 32.721 | 26.327 | 1438.5 |
| 35.0 | -1.736 | 0.60453 | 32.730 | 26.334 | 1438.5 |
| 37.5 | -1.745 | 0.60482 | 32.755 | 26.354 | 1438.5 |
| 40.0 | -1.752 | 0.60499 | 32.771 | 26.367 | 1438.5 |
| 42.5 | -1.755 | 0.60505 | 32.777 | 26.373 | 1438.6 |
| 45.0 | -1.754 | 0.60511 | 32.777 | 26.373 | 1438.6 |
| 47.5 | -1.743 | 0.60582 | 32.807 | 26.397 | 1438.8 |
| 50.0 | -1.745 | 0.60591 | 32.812 | 26.400 | 1438.8 |
| 55.0 | -1.732 | 0.60666 | 32.839 | 26.423 | 1439.0 |
| 60.0 | -1.713 | 0.60777 | 32.881 | 26.456 | 1439.2 |
| 65.0 | -1.703 | 0.60840 | 32.905 | 26.475 | 1439.4 |
| 70.0 | -1.711 | 0.60904 | 32.948 | 26.511 | 1439.5 |
| 75.0 | -1.714 | 0.60924 | 32.961 | 26.521 | 1439.5 |
| 79.5 | -1.709 | 0.60966 | 32.977 | 26.534 | 1439.7 |



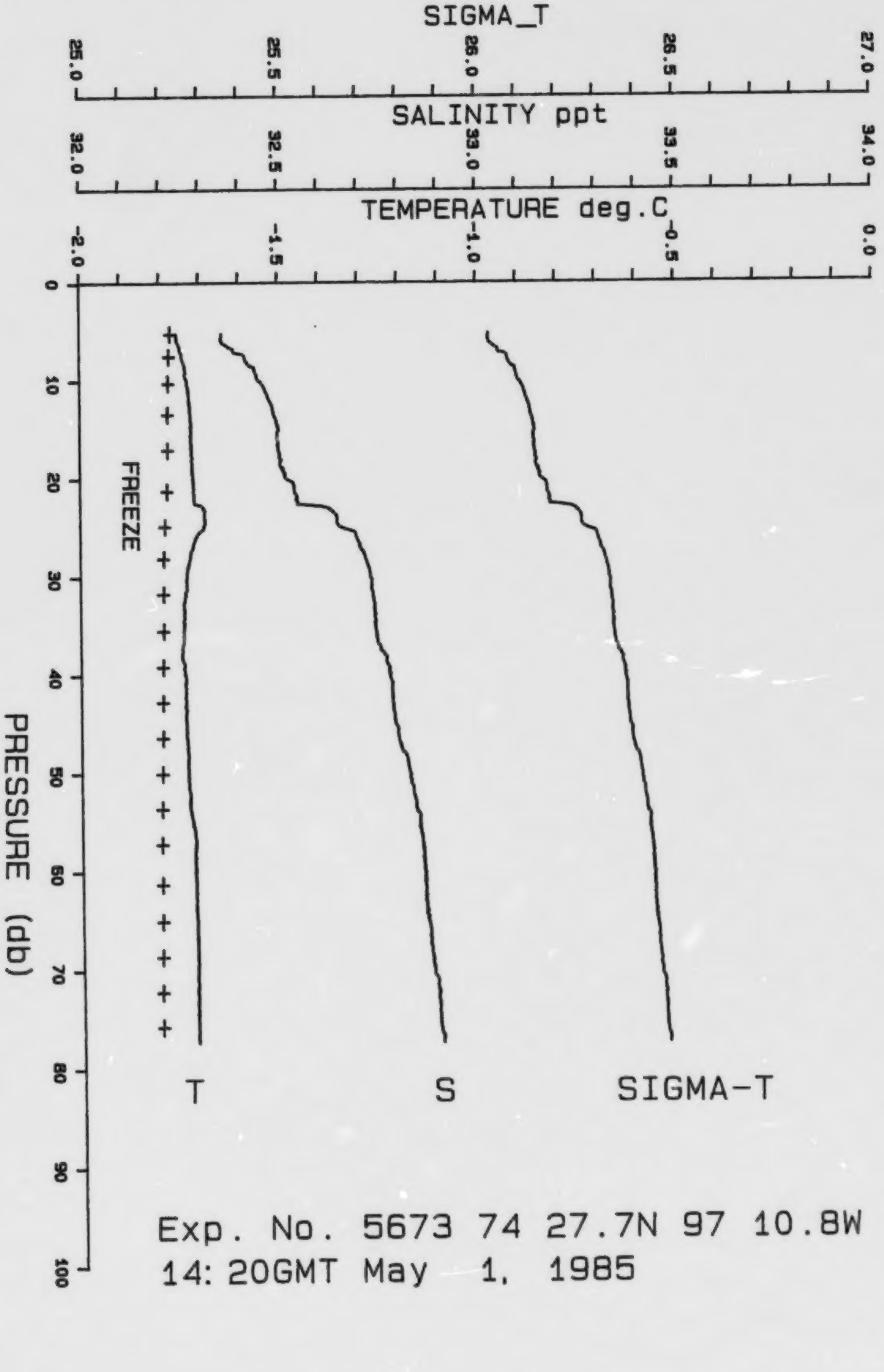
Exp. No. 5670 74 27.7N 97 10.8W
01: 56GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5673

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1420

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.2 | -1.757 | 0.59760 | 32.358 | 26.032 | 1437.4 |
| 6.0 | -1.754 | 0.59763 | 32.357 | 26.031 | 1437.4 |
| 7.0 | -1.746 | 0.59831 | 32.387 | 26.056 | 1437.5 |
| 8.0 | -1.739 | 0.59895 | 32.418 | 26.080 | 1437.6 |
| 9.0 | -1.734 | 0.59945 | 32.441 | 26.099 | 1437.7 |
| 10.0 | -1.730 | 0.59969 | 32.451 | 26.107 | 1437.7 |
| 11.0 | -1.727 | 0.60003 | 32.466 | 26.119 | 1437.8 |
| 12.0 | -1.726 | 0.60024 | 32.478 | 26.129 | 1437.8 |
| 13.0 | -1.722 | 0.60045 | 32.485 | 26.134 | 1437.9 |
| 14.0 | -1.720 | 0.60063 | 32.493 | 26.141 | 1437.9 |
| 15.0 | -1.721 | 0.60076 | 32.501 | 26.147 | 1437.9 |
| 16.0 | -1.720 | 0.60071 | 32.497 | 26.144 | 1437.9 |
| 17.0 | -1.719 | 0.60077 | 32.498 | 26.145 | 1438.0 |
| 18.0 | -1.720 | 0.60091 | 32.507 | 26.152 | 1438.0 |
| 19.0 | -1.717 | 0.60100 | 32.509 | 26.154 | 1438.0 |
| 20.0 | -1.717 | 0.60121 | 32.521 | 26.163 | 1438.0 |
| 21.0 | -1.714 | 0.60158 | 32.539 | 26.178 | 1438.1 |
| 22.0 | -1.715 | 0.60174 | 32.548 | 26.185 | 1438.1 |
| 23.0 | -1.690 | 0.60353 | 32.626 | 26.248 | 1438.4 |
| 24.0 | -1.689 | 0.60387 | 32.645 | 26.264 | 1438.4 |
| 25.0 | -1.690 | 0.60413 | 32.661 | 26.277 | 1438.4 |
| 26.0 | -1.712 | 0.60433 | 32.697 | 26.306 | 1438.4 |
| 27.0 | -1.719 | 0.60436 | 32.706 | 26.314 | 1438.4 |
| 28.0 | -1.724 | 0.60447 | 32.717 | 26.323 | 1438.4 |
| 29.0 | -1.731 | 0.60448 | 32.724 | 26.329 | 1438.4 |
| 30.0 | -1.732 | 0.60453 | 32.728 | 26.333 | 1438.4 |
| 31.0 | -1.733 | 0.60456 | 32.731 | 26.335 | 1438.4 |
| 32.0 | -1.739 | 0.60456 | 32.737 | 26.339 | 1438.4 |
| 33.0 | -1.741 | 0.60458 | 32.739 | 26.342 | 1438.4 |
| 34.0 | -1.740 | 0.60462 | 32.740 | 26.342 | 1438.5 |
| 35.0 | -1.740 | 0.60462 | 32.739 | 26.341 | 1438.5 |
| 37.5 | -1.745 | 0.60482 | 32.755 | 26.354 | 1438.5 |
| 40.0 | -1.737 | 0.60536 | 32.778 | 26.373 | 1438.6 |
| 42.5 | -1.737 | 0.60547 | 32.781 | 26.376 | 1438.7 |
| 45.0 | -1.736 | 0.60569 | 32.792 | 26.384 | 1438.7 |
| 47.5 | -1.734 | 0.60596 | 32.805 | 26.395 | 1438.8 |
| 50.0 | -1.731 | 0.60637 | 32.824 | 26.410 | 1438.9 |
| 55.0 | -1.722 | 0.60700 | 32.849 | 26.430 | 1439.0 |
| 60.0 | -1.717 | 0.60737 | 32.862 | 26.441 | 1439.2 |
| 65.0 | -1.712 | 0.60760 | 32.868 | 26.445 | 1439.3 |
| 70.0 | -1.712 | 0.60790 | 32.882 | 26.457 | 1439.4 |
| 75.0 | -1.712 | 0.60816 | 32.895 | 26.467 | 1439.5 |
| 77.3 | -1.713 | 0.60833 | 32.904 | 26.475 | 1439.5 |

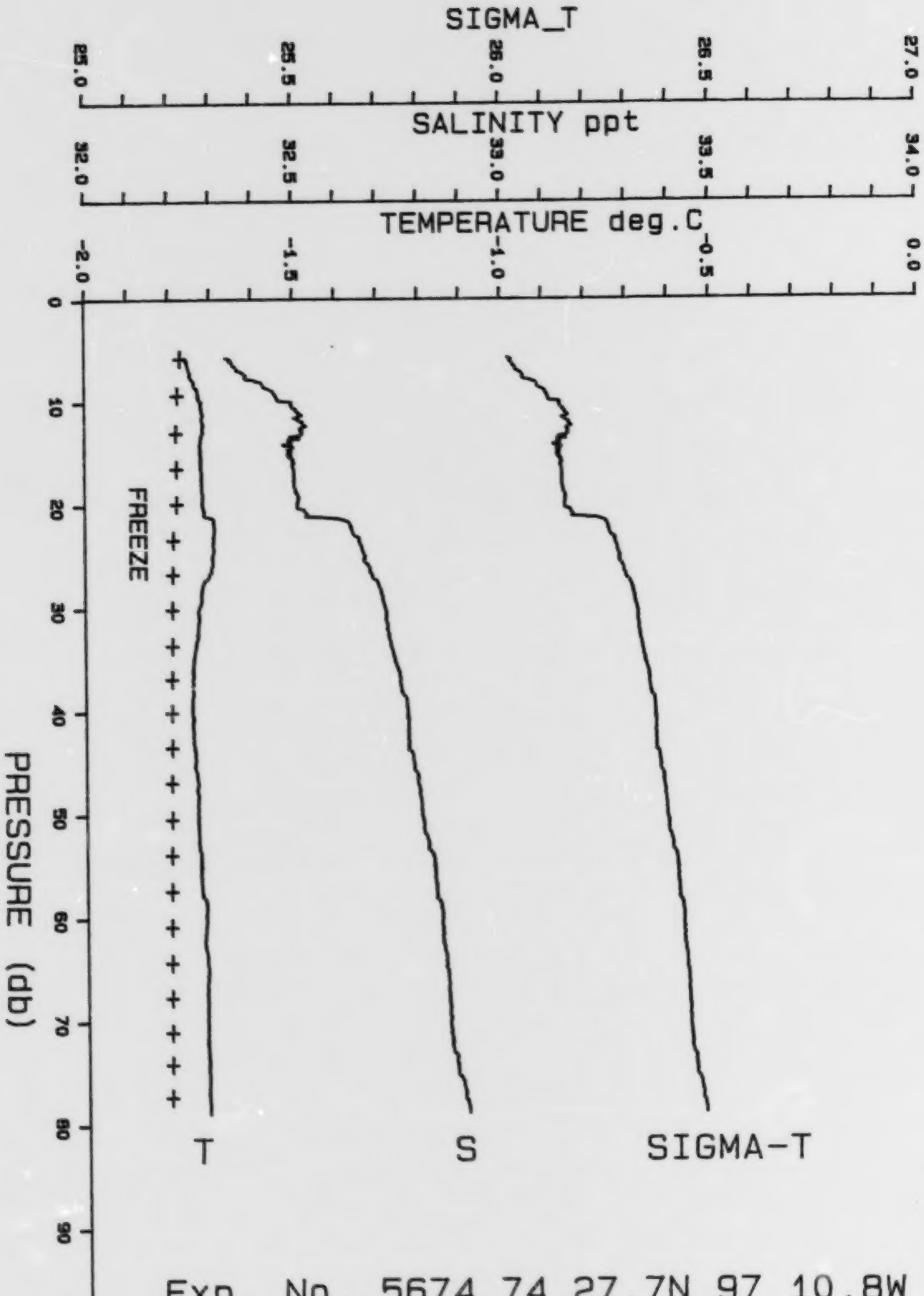

SIGMA_T
25.0
25.5
26.0
26.5
27.0
SALINITY ppt
32.0
32.5
33.0
33.5
34.0
TEMPERATURE deg.C
-2.0
-1.5
-1.0
-0.5
0.0
PRESSURE (db)
0
10
20
30
40
50
60
70
80
90
100
FREEZE
T
S
SIGMA-T
Exp. No. 5673 74 27.7N 97 10.8W
14: 20GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5674

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85

Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1502

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 5.7 | -1.760 | 0.59725 | 32.340 | 26.018 | 1437.4 |
| 6.0 | -1.754 | 0.59750 | 32.349 | 26.025 | 1437.4 |
| 7.0 | -1.749 | 0.59802 | 32.373 | 26.044 | 1437.5 |
| 8.0 | -1.737 | 0.59899 | 32.418 | 26.080 | 1437.6 |
| 9.0 | -1.728 | 0.59977 | 32.453 | 26.109 | 1437.7 |
| 10.0 | -1.721 | 0.60064 | 32.497 | 26.144 | 1437.8 |
| 11.0 | -1.719 | 0.60100 | 32.515 | 26.159 | 1437.9 |
| 12.0 | -1.718 | 0.60115 | 32.522 | 26.165 | 1437.9 |
| 13.0 | -1.717 | 0.60114 | 32.521 | 26.163 | 1437.9 |
| 14.0 | -1.725 | 0.60052 | 32.492 | 26.140 | 1437.9 |
| 15.0 | -1.724 | 0.60045 | 32.486 | 26.135 | 1437.9 |
| 16.0 | -1.722 | 0.60068 | 32.497 | 26.144 | 1437.9 |
| 17.0 | -1.721 | 0.60081 | 32.503 | 26.149 | 1438.0 |
| 18.0 | -1.720 | 0.60083 | 32.502 | 26.148 | 1438.0 |
| 19.0 | -1.717 | 0.60104 | 32.511 | 26.156 | 1438.0 |
| 20.0 | -1.718 | 0.60102 | 32.510 | 26.155 | 1438.0 |
| 21.0 | -1.715 | 0.60147 | 32.532 | 26.173 | 1438.1 |
| 22.0 | -1.690 | 0.60372 | 32.639 | 26.259 | 1438.4 |
| 23.0 | -1.694 | 0.60385 | 32.650 | 26.268 | 1438.4 |
| 24.0 | -1.693 | 0.60413 | 32.665 | 26.280 | 1438.4 |
| 25.0 | -1.694 | 0.60422 | 32.671 | 26.285 | 1438.4 |
| 26.0 | -1.699 | 0.60437 | 32.684 | 26.296 | 1438.5 |
| 27.0 | -1.705 | 0.60436 | 32.691 | 26.301 | 1438.4 |
| 28.0 | -1.720 | 0.60439 | 32.707 | 26.315 | 1438.4 |
| 29.0 | -1.721 | 0.60446 | 32.712 | 26.319 | 1438.4 |
| 30.0 | -1.729 | 0.60447 | 32.721 | 26.326 | 1438.4 |
| 31.0 | -1.728 | 0.60451 | 32.721 | 26.326 | 1438.4 |
| 32.0 | -1.729 | 0.60455 | 32.725 | 26.330 | 1438.5 |
| 33.0 | -1.733 | 0.60456 | 32.729 | 26.333 | 1438.5 |
| 34.0 | -1.739 | 0.60459 | 32.737 | 26.339 | 1438.5 |
| 35.0 | -1.741 | 0.60463 | 32.741 | 26.343 | 1438.5 |
| 37.5 | -1.745 | 0.60484 | 32.757 | 26.356 | 1438.5 |
| 40.0 | -1.746 | 0.60510 | 32.772 | 26.368 | 1438.6 |
| 42.5 | -1.744 | 0.60520 | 32.774 | 26.369 | 1438.6 |
| 45.0 | -1.740 | 0.60549 | 32.785 | 26.379 | 1438.7 |
| 47.5 | -1.735 | 0.60584 | 32.798 | 26.389 | 1438.8 |
| 50.0 | -1.732 | 0.60598 | 32.802 | 26.392 | 1438.8 |
| 55.0 | -1.726 | 0.60666 | 32.833 | 26.417 | 1439.0 |
| 60.0 | -1.717 | 0.60721 | 32.853 | 26.433 | 1439.1 |
| 65.0 | -1.714 | 0.60752 | 32.864 | 26.442 | 1439.3 |
| 70.0 | -1.715 | 0.60761 | 32.868 | 26.445 | 1439.3 |
| 75.0 | -1.712 | 0.60799 | 32.884 | 26.459 | 1439.5 |
| 78.8 | -1.712 | 0.60848 | 32.911 | 26.480 | 1439.6 |

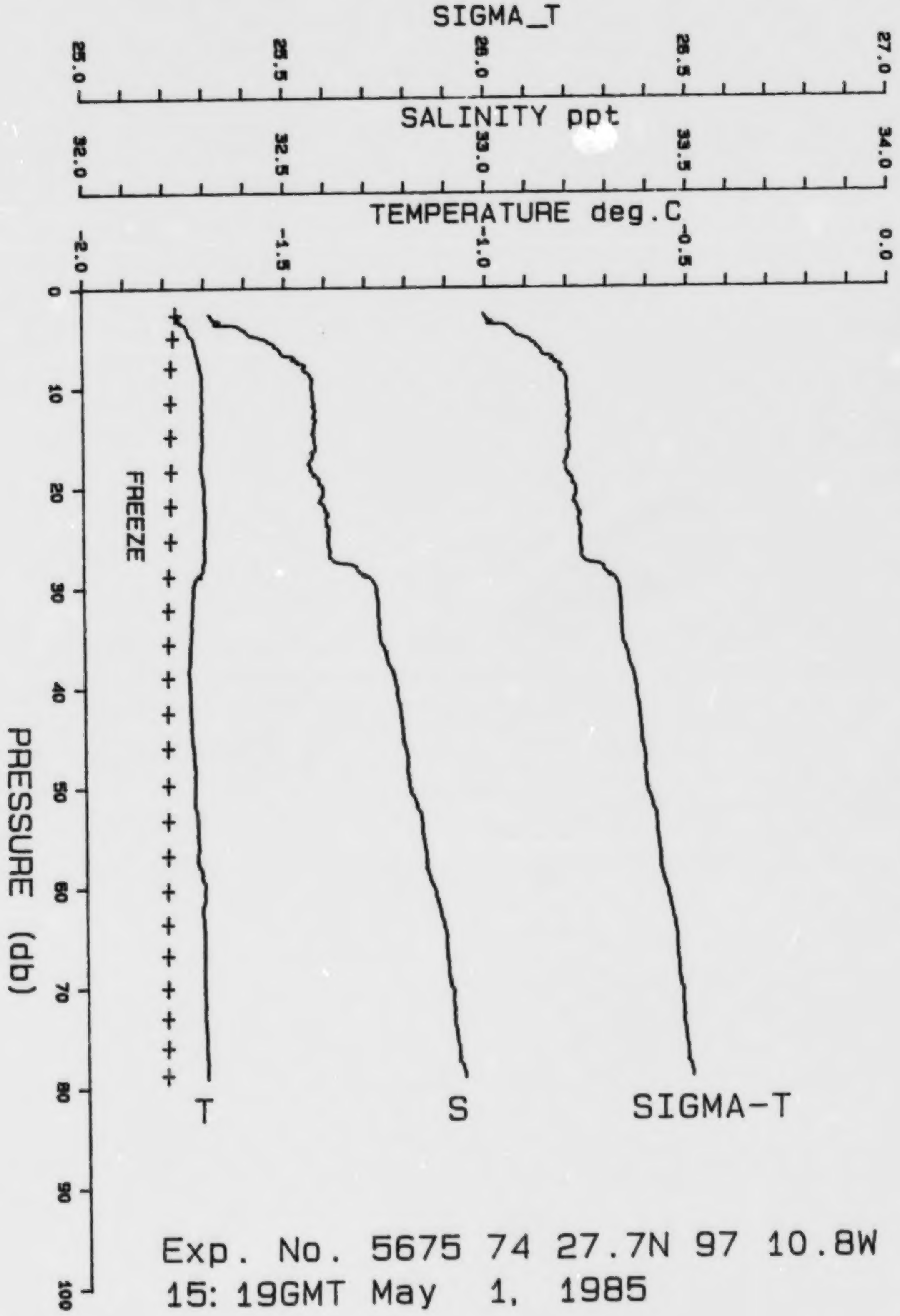


Exp. No. 5674 74 27.7N 97 10.8W
15: 02GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5675

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85
Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1519

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.6 | -1.765 | 0.59665 | 32.313 | 25.995 | 1437.3 |
| 3.0 | -1.765 | 0.59680 | 32.322 | 26.003 | 1437.3 |
| 4.0 | -1.743 | 0.59837 | 32.390 | 26.058 | 1437.5 |
| 5.0 | -1.727 | 0.59945 | 32.436 | 26.095 | 1437.6 |
| 6.0 | -1.723 | 0.60029 | 32.480 | 26.131 | 1437.7 |
| 7.0 | -1.717 | 0.60114 | 32.524 | 26.166 | 1437.8 |
| 8.0 | -1.712 | 0.60157 | 32.544 | 26.182 | 1437.9 |
| 9.0 | -1.705 | 0.60206 | 32.565 | 26.199 | 1438.0 |
| 10.0 | -1.706 | 0.60210 | 32.567 | 26.201 | 1438.0 |
| 11.0 | -1.706 | 0.60213 | 32.568 | 26.202 | 1438.0 |
| 12.0 | -1.707 | 0.60218 | 32.572 | 26.205 | 1438.0 |
| 13.0 | -1.705 | 0.60214 | 32.567 | 26.200 | 1438.1 |
| 14.0 | -1.706 | 0.60222 | 32.572 | 26.205 | 1438.1 |
| 15.0 | -1.707 | 0.60222 | 32.572 | 26.205 | 1438.1 |
| 16.0 | -1.706 | 0.60228 | 32.574 | 26.207 | 1438.1 |
| 17.0 | -1.709 | 0.60213 | 32.568 | 26.202 | 1438.1 |
| 18.0 | -1.711 | 0.60202 | 32.563 | 26.198 | 1438.1 |
| 19.0 | -1.705 | 0.60242 | 32.580 | 26.211 | 1438.2 |
| 20.0 | -1.704 | 0.60269 | 32.594 | 26.223 | 1438.2 |
| 21.0 | -1.703 | 0.60264 | 32.589 | 26.219 | 1438.2 |
| 22.0 | -1.701 | 0.60280 | 32.596 | 26.224 | 1438.3 |
| 23.0 | -1.701 | 0.60290 | 32.602 | 26.229 | 1438.3 |
| 24.0 | -1.700 | 0.60304 | 32.608 | 26.234 | 1438.3 |
| 25.0 | -1.701 | 0.60296 | 32.603 | 26.230 | 1438.3 |
| 26.0 | -1.702 | 0.60300 | 32.606 | 26.232 | 1438.3 |
| 27.0 | -1.703 | 0.60304 | 32.609 | 26.235 | 1438.4 |
| 28.0 | -1.706 | 0.60414 | 32.677 | 26.291 | 1438.4 |
| 29.0 | -1.722 | 0.60434 | 32.706 | 26.314 | 1438.4 |
| 30.0 | -1.731 | 0.60447 | 32.723 | 26.328 | 1438.4 |
| 31.0 | -1.731 | 0.60451 | 32.726 | 26.330 | 1438.4 |
| 32.0 | -1.734 | 0.60451 | 32.727 | 26.332 | 1438.4 |
| 33.0 | -1.735 | 0.60452 | 32.729 | 26.333 | 1438.5 |
| 34.0 | -1.734 | 0.60454 | 32.728 | 26.333 | 1438.5 |
| 35.0 | -1.738 | 0.60455 | 32.733 | 26.336 | 1438.5 |
| 37.5 | -1.741 | 0.60483 | 32.751 | 26.351 | 1438.5 |
| 40.0 | -1.740 | 0.60522 | 32.773 | 26.369 | 1438.6 |
| 42.5 | -1.738 | 0.60542 | 32.780 | 26.375 | 1438.7 |
| 45.0 | -1.736 | 0.60558 | 32.786 | 26.379 | 1438.7 |
| 47.5 | -1.731 | 0.60590 | 32.798 | 26.389 | 1438.8 |
| 50.0 | -1.729 | 0.60600 | 32.800 | 26.391 | 1438.9 |
| 55.0 | -1.724 | 0.60674 | 32.835 | 26.419 | 1439.0 |
| 60.0 | -1.709 | 0.60749 | 32.860 | 26.439 | 1439.2 |
| 65.0 | -1.710 | 0.60801 | 32.889 | 26.463 | 1439.3 |
| 70.0 | -1.710 | 0.60829 | 32.903 | 26.474 | 1439.4 |
| 75.0 | -1.707 | 0.60858 | 32.914 | 26.483 | 1439.5 |
| 79.0 | -1.705 | 0.60899 | 32.933 | 26.498 | 1439.6 |

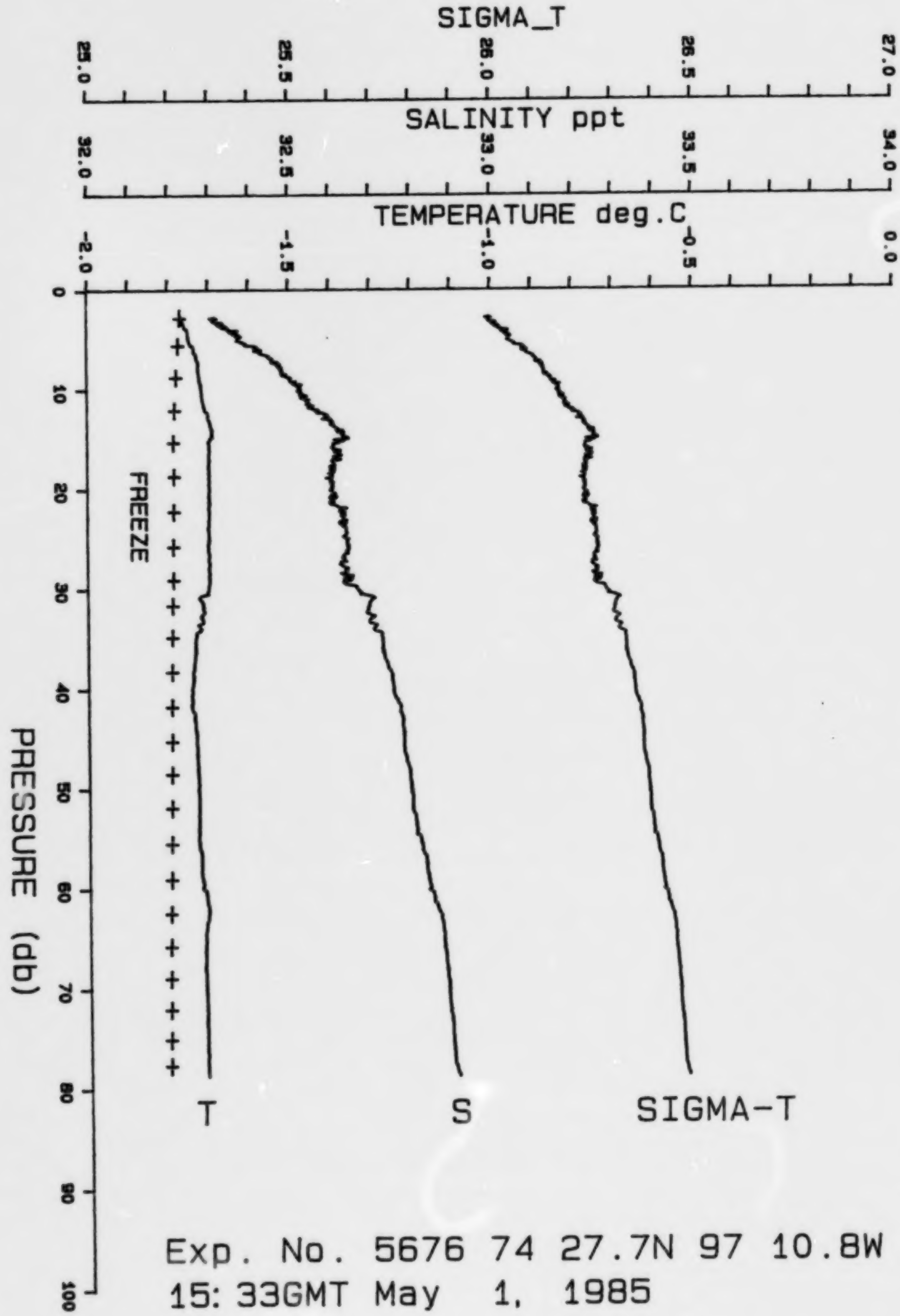


Exp. No. 5675 74 27.7N 97 10.8W
15: 19GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5676

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85
Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1533

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.8 | -1.767 | 0.59670 | 32.317 | 25.999 | 1437.3 |
| 3.0 | -1.766 | 0.59661 | 32.311 | 25.994 | 1437.3 |
| 4.0 | -1.751 | 0.59753 | 32.349 | 26.024 | 1437.4 |
| 5.0 | -1.748 | 0.59804 | 32.375 | 26.046 | 1437.5 |
| 6.0 | -1.737 | 0.59919 | 32.431 | 26.091 | 1437.6 |
| 7.0 | -1.727 | 0.59983 | 32.458 | 26.112 | 1437.7 |
| 8.0 | -1.724 | 0.60027 | 32.479 | 26.130 | 1437.8 |
| 9.0 | -1.723 | 0.60068 | 32.502 | 26.148 | 1437.8 |
| 10.0 | -1.716 | 0.60126 | 32.528 | 26.170 | 1437.9 |
| 11.0 | -1.715 | 0.60152 | 32.542 | 26.180 | 1437.9 |
| 12.0 | -1.709 | 0.60195 | 32.561 | 26.196 | 1438.0 |
| 13.0 | -1.699 | 0.60264 | 32.590 | 26.219 | 1438.1 |
| 14.0 | -1.690 | 0.60326 | 32.617 | 26.241 | 1438.2 |
| 15.0 | -1.697 | 0.60334 | 32.628 | 26.250 | 1438.2 |
| 16.0 | -1.699 | 0.60308 | 32.614 | 26.239 | 1438.2 |
| 17.0 | -1.699 | 0.60333 | 32.629 | 26.251 | 1438.2 |
| 18.0 | -1.699 | 0.60292 | 32.604 | 26.230 | 1438.2 |
| 19.0 | -1.699 | 0.60293 | 32.603 | 26.230 | 1438.2 |
| 20.0 | -1.698 | 0.60297 | 32.604 | 26.231 | 1438.3 |
| 21.0 | -1.699 | 0.60298 | 32.605 | 26.231 | 1438.3 |
| 22.0 | -1.701 | 0.60340 | 32.631 | 26.253 | 1438.3 |
| 23.0 | -1.700 | 0.60348 | 32.634 | 26.255 | 1438.3 |
| 24.0 | -1.702 | 0.60356 | 32.641 | 26.261 | 1438.3 |
| 25.0 | -1.699 | 0.60369 | 32.645 | 26.264 | 1438.4 |
| 26.0 | -1.702 | 0.60366 | 32.646 | 26.265 | 1438.4 |
| 27.0 | -1.701 | 0.60351 | 32.635 | 26.256 | 1438.4 |
| 28.0 | -1.700 | 0.60363 | 32.641 | 26.261 | 1438.4 |
| 29.0 | -1.701 | 0.60381 | 32.651 | 26.269 | 1438.4 |
| 30.0 | -1.702 | 0.60406 | 32.667 | 26.282 | 1438.5 |
| 31.0 | -1.722 | 0.60431 | 32.704 | 26.313 | 1438.4 |
| 32.0 | -1.715 | 0.60428 | 32.693 | 26.303 | 1438.5 |
| 33.0 | -1.716 | 0.60436 | 32.698 | 26.308 | 1438.5 |
| 34.0 | -1.720 | 0.60440 | 32.705 | 26.313 | 1438.5 |
| 35.0 | -1.735 | 0.60452 | 32.728 | 26.332 | 1438.5 |
| 37.5 | -1.740 | 0.60467 | 32.741 | 26.343 | 1438.5 |
| 40.0 | -1.745 | 0.60484 | 32.755 | 26.354 | 1438.6 |
| 42.5 | -1.738 | 0.60531 | 32.773 | 26.369 | 1438.7 |
| 45.0 | -1.734 | 0.60550 | 32.779 | 26.374 | 1438.7 |
| 47.5 | -1.732 | 0.60572 | 32.788 | 26.381 | 1438.8 |
| 50.0 | -1.730 | 0.60592 | 32.797 | 26.388 | 1438.8 |
| 55.0 | -1.730 | 0.60635 | 32.819 | 26.406 | 1439.0 |
| 60.0 | -1.721 | 0.60696 | 32.842 | 26.424 | 1439.1 |
| 65.0 | -1.716 | 0.60769 | 32.876 | 26.452 | 1439.3 |
| 70.0 | -1.715 | 0.60794 | 32.888 | 26.462 | 1439.4 |
| 75.0 | -1.712 | 0.60820 | 32.897 | 26.469 | 1439.5 |
| 78.7 | -1.710 | 0.60852 | 32.911 | 26.481 | 1439.6 |

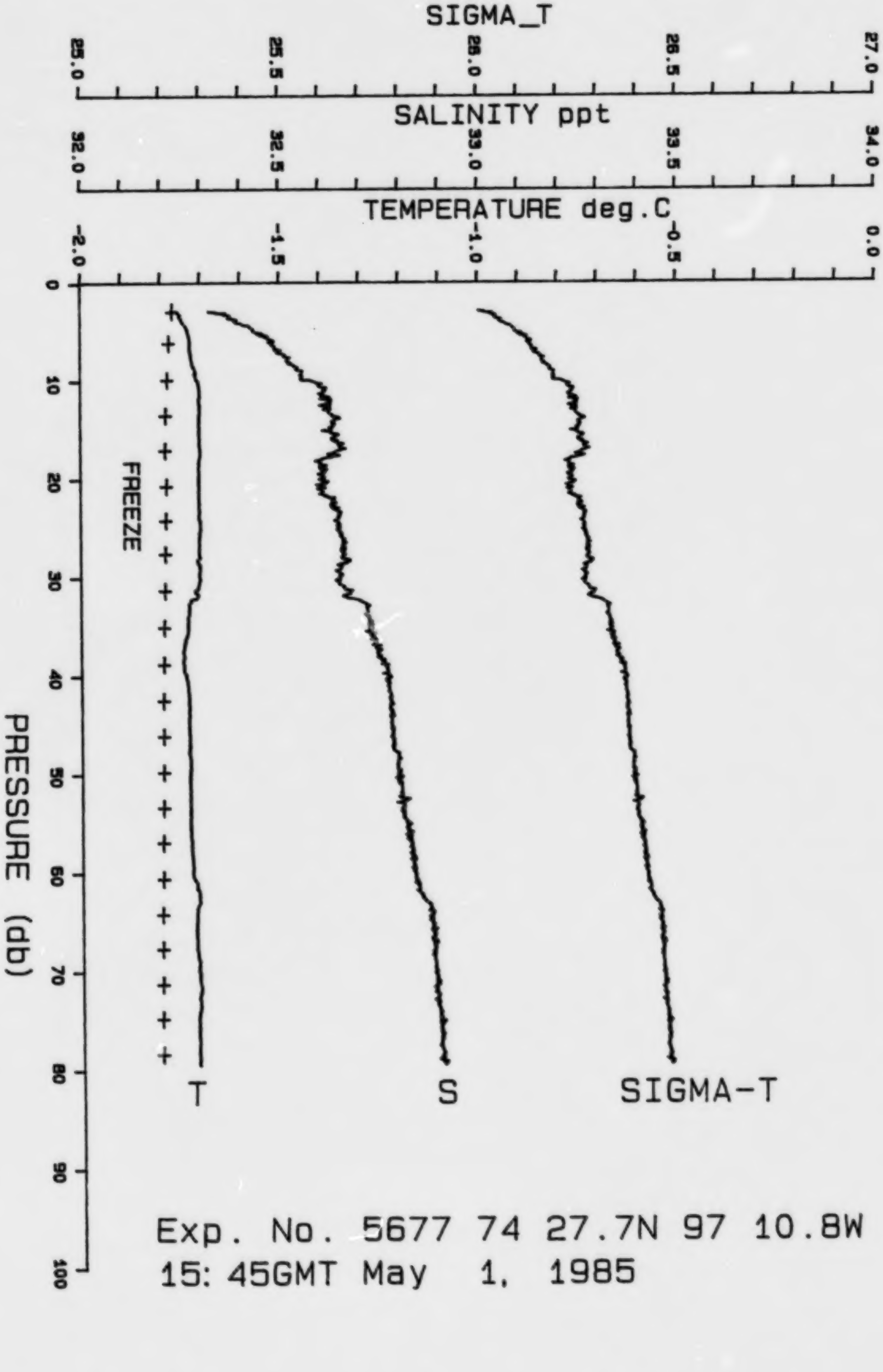


Exp. No. 5676 74 27.7N 97 10.8W
15: 33GMT May 1, 1985

Ice Keel '85 Experiment   Barrow Strait   Exp. No. 5677

Lat. 75 27.7N   Lon. 97 10.8W   DDMMYY 1/ 5/85
Ice Thickness 1.5m   Water Depth 114m   G.M.T. 1545

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.9 | -1.758 | 0.59695 | 32.322 | 26.003 | 1437.3 |
| 3.0 | -1.756 | 0.59724 | 32.338 | 26.016 | 1437.3 |
| 4.0 | -1.745 | 0.59835 | 32.391 | 26.059 | 1437.5 |
| 5.0 | -1.731 | 0.59941 | 32.438 | 26.096 | 1437.6 |
| 6.0 | -1.726 | 0.60023 | 32.481 | 26.131 | 1437.7 |
| 7.0 | -1.725 | 0.60055 | 32.498 | 26.145 | 1437.8 |
| 8.0 | -1.719 | 0.60104 | 32.520 | 26.163 | 1437.8 |
| 9.0 | -1.713 | 0.60181 | 32.558 | 26.194 | 1437.9 |
| 10.0 | -1.706 | 0.60234 | 32.581 | 26.212 | 1438.0 |
| 11.0 | -1.701 | 0.60288 | 32.608 | 26.234 | 1438.1 |
| 12.0 | -1.703 | 0.60313 | 32.624 | 26.247 | 1438.1 |
| 13.0 | -1.701 | 0.60312 | 32.621 | 26.244 | 1438.1 |
| 14.0 | -1.703 | 0.60341 | 32.639 | 26.260 | 1438.2 |
| 15.0 | -1.704 | 0.60317 | 32.626 | 26.248 | 1438.2 |
| 16.0 | -1.702 | 0.60332 | 32.631 | 26.253 | 1438.2 |
| 17.0 | -1.701 | 0.60373 | 32.654 | 26.271 | 1438.3 |
| 18.0 | -1.703 | 0.60286 | 32.605 | 26.231 | 1438.2 |
| 19.0 | -1.704 | 0.60292 | 32.608 | 26.234 | 1438.2 |
| 20.0 | -1.704 | 0.60295 | 32.609 | 26.235 | 1438.2 |
| 21.0 | -1.703 | 0.60271 | 32.594 | 26.222 | 1438.2 |
| 22.0 | -1.704 | 0.60331 | 32.630 | 26.252 | 1438.3 |
| 23.0 | -1.704 | 0.60345 | 32.638 | 26.258 | 1438.3 |
| 24.0 | -1.705 | 0.60360 | 32.647 | 26.266 | 1438.3 |
| 25.0 | -1.701 | 0.60368 | 32.647 | 26.265 | 1438.4 |
| 26.0 | -1.704 | 0.60379 | 32.656 | 26.273 | 1438.4 |
| 27.0 | -1.703 | 0.60381 | 32.656 | 26.273 | 1438.4 |
| 28.0 | -1.702 | 0.60394 | 32.661 | 26.277 | 1438.4 |
| 29.0 | -1.703 | 0.60380 | 32.653 | 26.271 | 1438.4 |
| 30.0 | -1.701 | 0.60378 | 32.650 | 26.268 | 1438.5 |
| 31.0 | -1.705 | 0.60390 | 32.660 | 26.277 | 1438.5 |
| 32.0 | -1.710 | 0.60399 | 32.670 | 26.284 | 1438.5 |
| 33.0 | -1.729 | 0.60443 | 32.717 | 26.323 | 1438.5 |
| 34.0 | -1.733 | 0.60451 | 32.725 | 26.330 | 1438.5 |
| 35.0 | -1.733 | 0.60447 | 32.722 | 26.328 | 1438.5 |
| 37.5 | -1.746 | 0.60466 | 32.746 | 26.347 | 1438.5 |
| 40.0 | -1.738 | 0.60530 | 32.774 | 26.370 | 1438.6 |
| 42.5 | -1.732 | 0.60549 | 32.777 | 26.372 | 1438.7 |
| 45.0 | -1.731 | 0.60554 | 32.778 | 26.372 | 1438.7 |
| 47.5 | -1.731 | 0.60564 | 32.782 | 26.376 | 1438.8 |
| 50.0 | -1.730 | 0.60592 | 32.796 | 26.387 | 1438.8 |
| 55.0 | -1.730 | 0.60643 | 32.823 | 26.409 | 1439.0 |
| 60.0 | -1.726 | 0.60676 | 32.835 | 26.419 | 1439.1 |
| 65.0 | -1.716 | 0.60767 | 32.876 | 26.452 | 1439.3 |
| 70.0 | -1.709 | 0.60799 | 32.884 | 26.458 | 1439.4 |
| 75.0 | -1.712 | 0.60822 | 32.897 | 26.469 | 1439.5 |
| 79.4 | -1.710 | 0.60841 | 32.905 | 26.475 | 1439.6 |

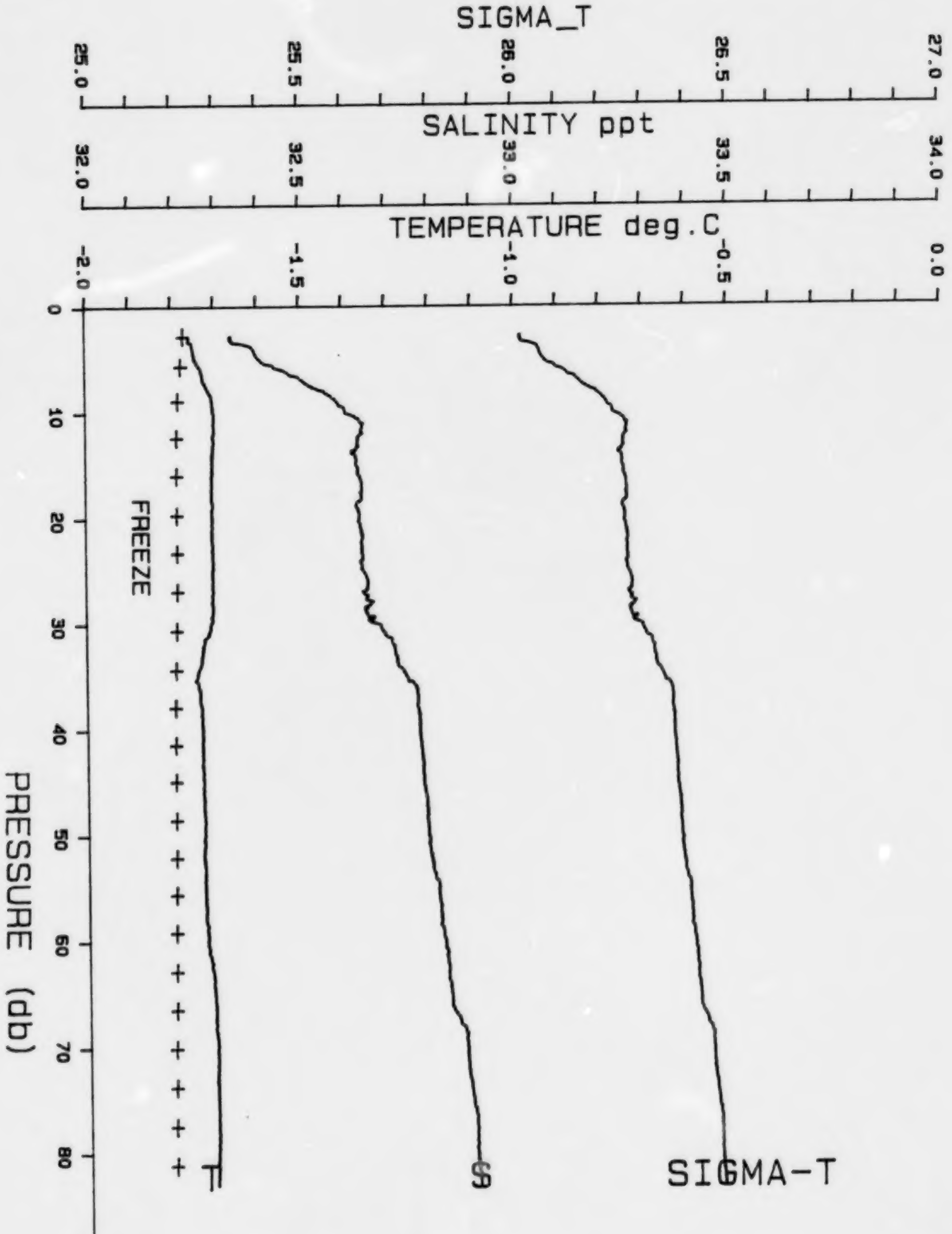


Exp. No. 5677 74 27.7N 97 10.8W
15: 45GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5678

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85
Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1601

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.8 | -1.758 | 0.59727 | 32.342 | 26.019 | 1437.3 |
| 3.0 | -1.757 | 0.59724 | 32.338 | 26.016 | 1437.3 |
| 4.0 | -1.747 | 0.59835 | 32.393 | 26.060 | 1437.5 |
| 5.0 | -1.744 | 0.59868 | 32.409 | 26.073 | 1437.5 |
| 6.0 | -1.730 | 0.59985 | 32.462 | 26.116 | 1437.7 |
| 7.0 | -1.724 | 0.60075 | 32.509 | 26.154 | 1437.8 |
| 8.0 | -1.713 | 0.60179 | 32.558 | 26.194 | 1437.9 |
| 9.0 | -1.703 | 0.60249 | 32.588 | 26.217 | 1438.0 |
| 10.0 | -1.700 | 0.60285 | 32.605 | 26.232 | 1438.1 |
| 11.0 | -1.702 | 0.60350 | 32.646 | 26.265 | 1438.1 |
| 12.0 | -1.702 | 0.60353 | 32.647 | 26.266 | 1438.2 |
| 13.0 | -1.702 | 0.60334 | 32.635 | 26.256 | 1438.2 |
| 14.0 | -1.706 | 0.60317 | 32.628 | 26.251 | 1438.2 |
| 15.0 | -1.704 | 0.60324 | 32.630 | 26.252 | 1438.2 |
| 16.0 | -1.708 | 0.60336 | 32.640 | 26.260 | 1438.2 |
| 17.0 | -1.705 | 0.60346 | 32.643 | 26.262 | 1438.2 |
| 18.0 | -1.706 | 0.60346 | 32.644 | 26.263 | 1438.2 |
| 19.0 | -1.705 | 0.60331 | 32.632 | 26.254 | 1438.2 |
| 20.0 | -1.705 | 0.60340 | 32.637 | 26.258 | 1438.3 |
| 21.0 | -1.705 | 0.60349 | 32.642 | 26.262 | 1438.3 |
| 22.0 | -1.706 | 0.60353 | 32.644 | 26.264 | 1438.3 |
| 23.0 | -1.707 | 0.60354 | 32.646 | 26.265 | 1438.3 |
| 24.0 | -1.706 | 0.60357 | 32.646 | 26.265 | 1438.3 |
| 25.0 | -1.705 | 0.60360 | 32.646 | 26.265 | 1438.4 |
| 26.0 | -1.704 | 0.60378 | 32.655 | 26.272 | 1438.4 |
| 27.0 | -1.704 | 0.60361 | 32.645 | 26.264 | 1438.4 |
| 28.0 | -1.707 | 0.60388 | 32.663 | 26.279 | 1438.4 |
| 29.0 | -1.706 | 0.60377 | 32.655 | 26.272 | 1438.4 |
| 30.0 | -1.711 | 0.60405 | 32.676 | 26.290 | 1438.4 |
| 31.0 | -1.716 | 0.60429 | 32.696 | 26.306 | 1438.5 |
| 32.0 | -1.728 | 0.60441 | 32.715 | 26.322 | 1438.5 |
| 33.0 | -1.730 | 0.60446 | 32.721 | 26.326 | 1438.5 |
| 34.0 | -1.736 | 0.60448 | 32.727 | 26.332 | 1438.5 |
| 35.0 | -1.744 | 0.60465 | 32.745 | 26.346 | 1438.5 |
| 37.5 | -1.735 | 0.60523 | 32.769 | 26.365 | 1438.6 |
| 40.0 | -1.732 | 0.60541 | 32.774 | 26.370 | 1438.6 |
| 42.5 | -1.732 | 0.60552 | 32.779 | 26.374 | 1438.7 |
| 45.0 | -1.731 | 0.60562 | 32.783 | 26.377 | 1438.7 |
| 47.5 | -1.731 | 0.60578 | 32.790 | 26.383 | 1438.8 |
| 50.0 | -1.729 | 0.60587 | 32.792 | 26.384 | 1438.8 |
| 55.0 | -1.729 | 0.60632 | 32.815 | 26.403 | 1439.0 |
| 60.0 | -1.725 | 0.60669 | 32.830 | 26.415 | 1439.1 |
| 65.0 | -1.710 | 0.60724 | 32.844 | 26.426 | 1439.2 |
| 70.0 | -1.704 | 0.60800 | 32.879 | 26.454 | 1439.4 |
| 75.0 | -1.705 | 0.60826 | 32.893 | 26.466 | 1439.5 |
| 80.0 | -1.705 | 0.60844 | 32.900 | 26.471 | 1439.6 |
| 83.0 | -1.707 | 0.60852 | 32.905 | 26.475 | 1439.6 |

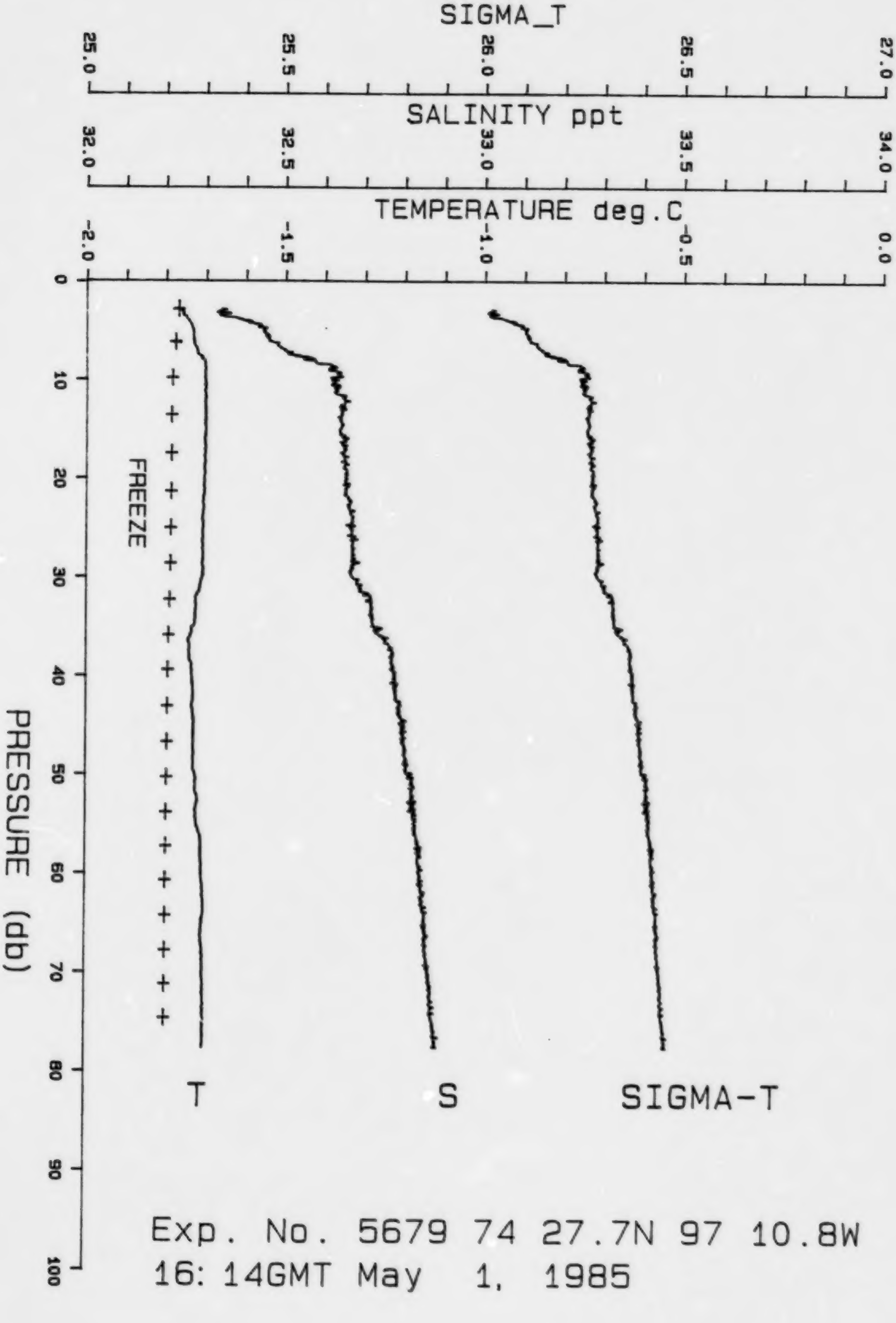


Exp. No. 5678 74 27.7N 97 10.8W
16: 01GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5679

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85
Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1614

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.8 | -1.762 | 0.59716 | 32.339 | 26.017 | 1437.3 |
| 3.0 | -1.764 | 0.59709 | 32.337 | 26.015 | 1437.3 |
| 4.0 | -1.745 | 0.59846 | 32.397 | 26.064 | 1437.5 |
| 5.0 | -1.735 | 0.59943 | 32.444 | 26.101 | 1437.6 |
| 6.0 | -1.733 | 0.59975 | 32.460 | 26.114 | 1437.7 |
| 7.0 | -1.725 | 0.60056 | 32.499 | 26.146 | 1437.8 |
| 8.0 | -1.706 | 0.60200 | 32.563 | 26.197 | 1438.0 |
| 9.0 | -1.703 | 0.60288 | 32.611 | 26.236 | 1438.1 |
| 10.0 | -1.702 | 0.60303 | 32.618 | 26.242 | 1438.1 |
| 11.0 | -1.704 | 0.60316 | 32.627 | 26.250 | 1438.1 |
| 12.0 | -1.704 | 0.60352 | 32.648 | 26.267 | 1438.2 |
| 13.0 | -1.702 | 0.60358 | 32.649 | 26.268 | 1438.2 |
| 14.0 | -1.701 | 0.60338 | 32.635 | 26.256 | 1438.2 |
| 15.0 | -1.702 | 0.60337 | 32.635 | 26.256 | 1438.2 |
| 16.0 | -1.704 | 0.60354 | 32.647 | 26.265 | 1438.2 |
| 17.0 | -1.704 | 0.60363 | 32.652 | 26.270 | 1438.2 |
| 18.0 | -1.703 | 0.60359 | 32.648 | 26.266 | 1438.3 |
| 19.0 | -1.705 | 0.60359 | 32.649 | 26.268 | 1438.3 |
| 20.0 | -1.706 | 0.60367 | 32.654 | 26.272 | 1438.3 |
| 21.0 | -1.704 | 0.60366 | 32.651 | 26.269 | 1438.3 |
| 22.0 | -1.707 | 0.60372 | 32.657 | 26.274 | 1438.3 |
| 23.0 | -1.706 | 0.60377 | 32.658 | 26.275 | 1438.3 |
| 24.0 | -1.710 | 0.60385 | 32.667 | 26.282 | 1438.3 |
| 25.0 | -1.708 | 0.60384 | 32.664 | 26.280 | 1438.4 |
| 26.0 | -1.708 | 0.60389 | 32.666 | 26.281 | 1438.4 |
| 27.0 | -1.711 | 0.60391 | 32.670 | 26.284 | 1438.4 |
| 28.0 | -1.708 | 0.60392 | 32.667 | 26.282 | 1438.4 |
| 29.0 | -1.707 | 0.60393 | 32.665 | 26.281 | 1438.4 |
| 30.0 | -1.710 | 0.60395 | 32.670 | 26.284 | 1438.4 |
| 31.0 | -1.715 | 0.60414 | 32.685 | 26.297 | 1438.5 |
| 32.0 | -1.728 | 0.60434 | 32.711 | 26.319 | 1438.4 |
| 33.0 | -1.726 | 0.60441 | 32.713 | 26.319 | 1438.5 |
| 34.0 | -1.727 | 0.60442 | 32.714 | 26.320 | 1438.5 |
| 35.0 | -1.734 | 0.60452 | 32.727 | 26.331 | 1438.5 |
| 37.5 | -1.744 | 0.60505 | 32.767 | 26.364 | 1438.5 |
| 40.0 | -1.735 | 0.60532 | 32.772 | 26.368 | 1438.6 |
| 42.5 | -1.732 | 0.60557 | 32.783 | 26.377 | 1438.7 |
| 45.0 | -1.732 | 0.60584 | 32.796 | 26.388 | 1438.8 |
| 47.5 | -1.731 | 0.60590 | 32.797 | 26.388 | 1438.8 |
| 50.0 | -1.725 | 0.60629 | 32.813 | 26.401 | 1438.9 |
| 55.0 | -1.723 | 0.60658 | 32.824 | 26.410 | 1439.0 |
| 60.0 | -1.711 | 0.60709 | 32.839 | 26.422 | 1439.2 |
| 65.0 | -1.708 | 0.60735 | 32.848 | 26.429 | 1439.3 |
| 70.0 | -1.707 | 0.60760 | 32.858 | 26.437 | 1439.4 |
| 75.0 | -1.705 | 0.60789 | 32.870 | 26.447 | 1439.5 |
| 77.6 | -1.707 | 0.60806 | 32.881 | 26.456 | 1439.5 |

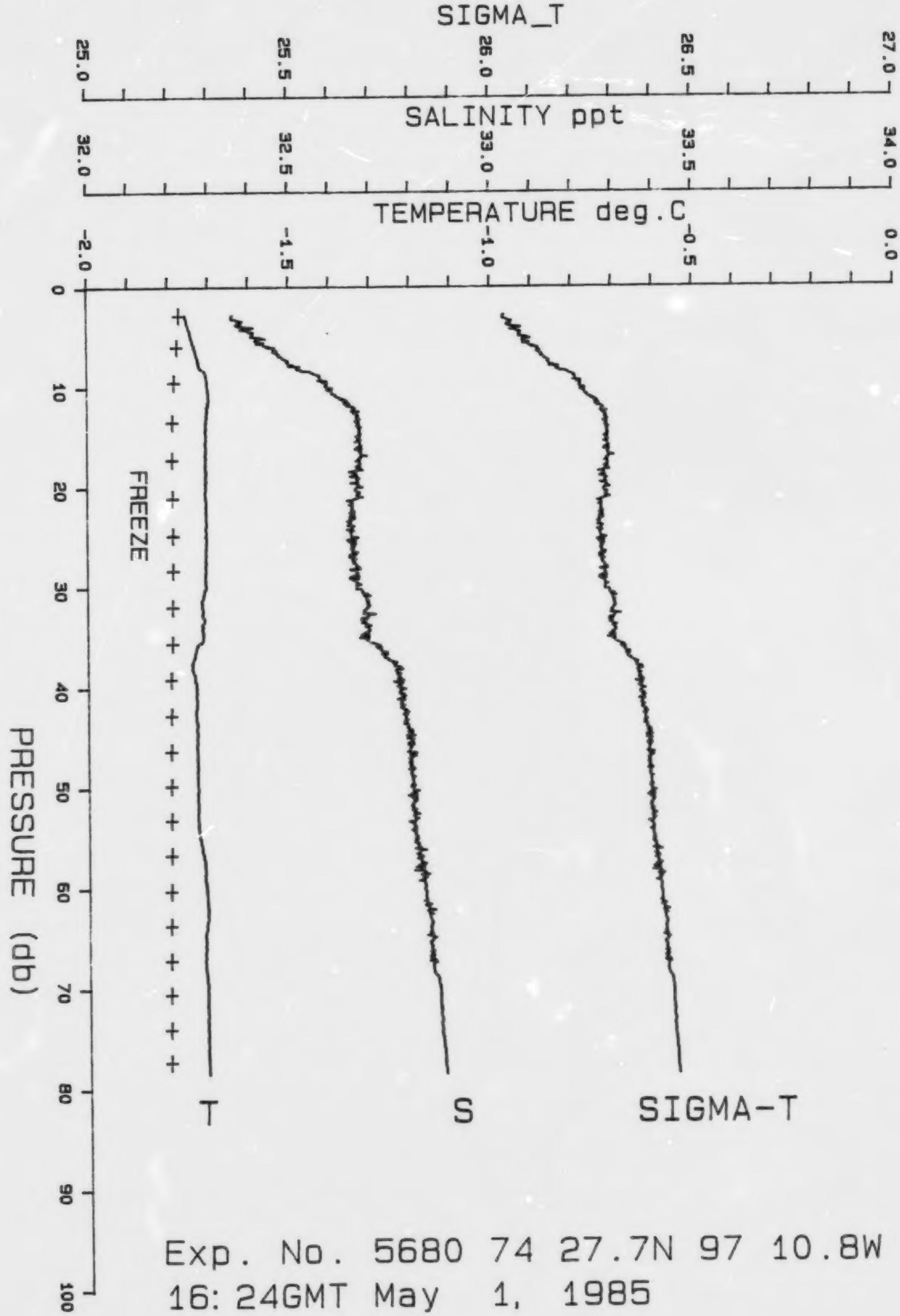


Exp. No. 5679 74 27.7N 97 10.8W
16: 14GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5680

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1624

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.8 | -1.756 | 0.59766 | 32.363 | 26.036 | 1437.4 |
| 3.0 | -1.755 | 0.59760 | 32.358 | 26.032 | 1437.4 |
| 4.0 | -1.748 | 0.59852 | 32.403 | 26.069 | 1437.5 |
| 5.0 | -1.742 | 0.59901 | 32.427 | 26.087 | 1437.6 |
| 6.0 | -1.735 | 0.59960 | 32.454 | 26.109 | 1437.6 |
| 7.0 | -1.727 | 0.60029 | 32.485 | 26.134 | 1437.7 |
| 8.0 | -1.720 | 0.60100 | 32.518 | 26.162 | 1437.8 |
| 9.0 | -1.704 | 0.60234 | 32.580 | 26.211 | 1438.0 |
| 10.0 | -1.701 | 0.60263 | 32.594 | 26.222 | 1438.1 |
| 11.0 | -1.701 | 0.60318 | 32.625 | 26.248 | 1438.1 |
| 12.0 | -1.703 | 0.60374 | 32.661 | 26.277 | 1438.2 |
| 13.0 | -1.704 | 0.60388 | 32.669 | 26.284 | 1438.2 |
| 14.0 | -1.707 | 0.60401 | 32.679 | 26.292 | 1438.2 |
| 15.0 | -1.706 | 0.60392 | 32.673 | 26.287 | 1438.2 |
| 16.0 | -1.707 | 0.60390 | 32.671 | 26.286 | 1438.2 |
| 17.0 | -1.706 | 0.60401 | 32.677 | 26.290 | 1438.3 |
| 18.0 | -1.707 | 0.60401 | 32.677 | 26.290 | 1438.3 |
| 19.0 | -1.706 | 0.60384 | 32.665 | 26.281 | 1438.3 |
| 20.0 | -1.709 | 0.60407 | 32.681 | 26.294 | 1438.3 |
| 21.0 | -1.707 | 0.60406 | 32.678 | 26.291 | 1438.3 |
| 22.0 | -1.706 | 0.60371 | 32.656 | 26.273 | 1438.3 |
| 23.0 | -1.707 | 0.60361 | 32.650 | 26.268 | 1438.3 |
| 24.0 | -1.709 | 0.60365 | 32.654 | 26.271 | 1438.3 |
| 25.0 | -1.705 | 0.60398 | 32.669 | 26.283 | 1438.4 |
| 26.0 | -1.707 | 0.60374 | 32.656 | 26.274 | 1438.4 |
| 27.0 | -1.709 | 0.60367 | 32.653 | 26.270 | 1438.4 |
| 28.0 | -1.708 | 0.60396 | 32.669 | 26.284 | 1438.4 |
| 29.0 | -1.709 | 0.60381 | 32.661 | 26.277 | 1438.4 |
| 30.0 | -1.707 | 0.60393 | 32.666 | 26.281 | 1438.5 |
| 31.0 | -1.715 | 0.60421 | 32.689 | 26.300 | 1438.5 |
| 32.0 | -1.718 | 0.60421 | 32.692 | 26.303 | 1438.5 |
| 33.0 | -1.712 | 0.60417 | 32.683 | 26.295 | 1438.5 |
| 34.0 | -1.717 | 0.60428 | 32.694 | 26.304 | 1438.5 |
| 35.0 | -1.714 | 0.60401 | 32.675 | 26.289 | 1438.5 |
| 37.5 | -1.742 | 0.60486 | 32.754 | 26.354 | 1438.5 |
| 40.0 | -1.733 | 0.60537 | 32.772 | 26.368 | 1438.6 |
| 42.5 | -1.735 | 0.60559 | 32.786 | 26.380 | 1438.7 |
| 45.0 | -1.732 | 0.60571 | 32.789 | 26.382 | 1438.7 |
| 47.5 | -1.731 | 0.60585 | 32.795 | 26.386 | 1438.8 |
| 50.0 | -1.729 | 0.60603 | 32.802 | 26.392 | 1438.9 |
| 55.0 | -1.724 | 0.60629 | 32.808 | 26.397 | 1439.0 |
| 60.0 | -1.712 | 0.60692 | 32.829 | 26.414 | 1439.1 |
| 65.0 | -1.714 | 0.60725 | 32.848 | 26.430 | 1439.2 |
| 70.0 | -1.710 | 0.60767 | 32.866 | 26.444 | 1439.4 |
| 75.0 | -1.710 | 0.60784 | 32.873 | 26.450 | 1439.4 |
| 78.4 | -1.707 | 0.60805 | 32.880 | 26.455 | 1439.5 |

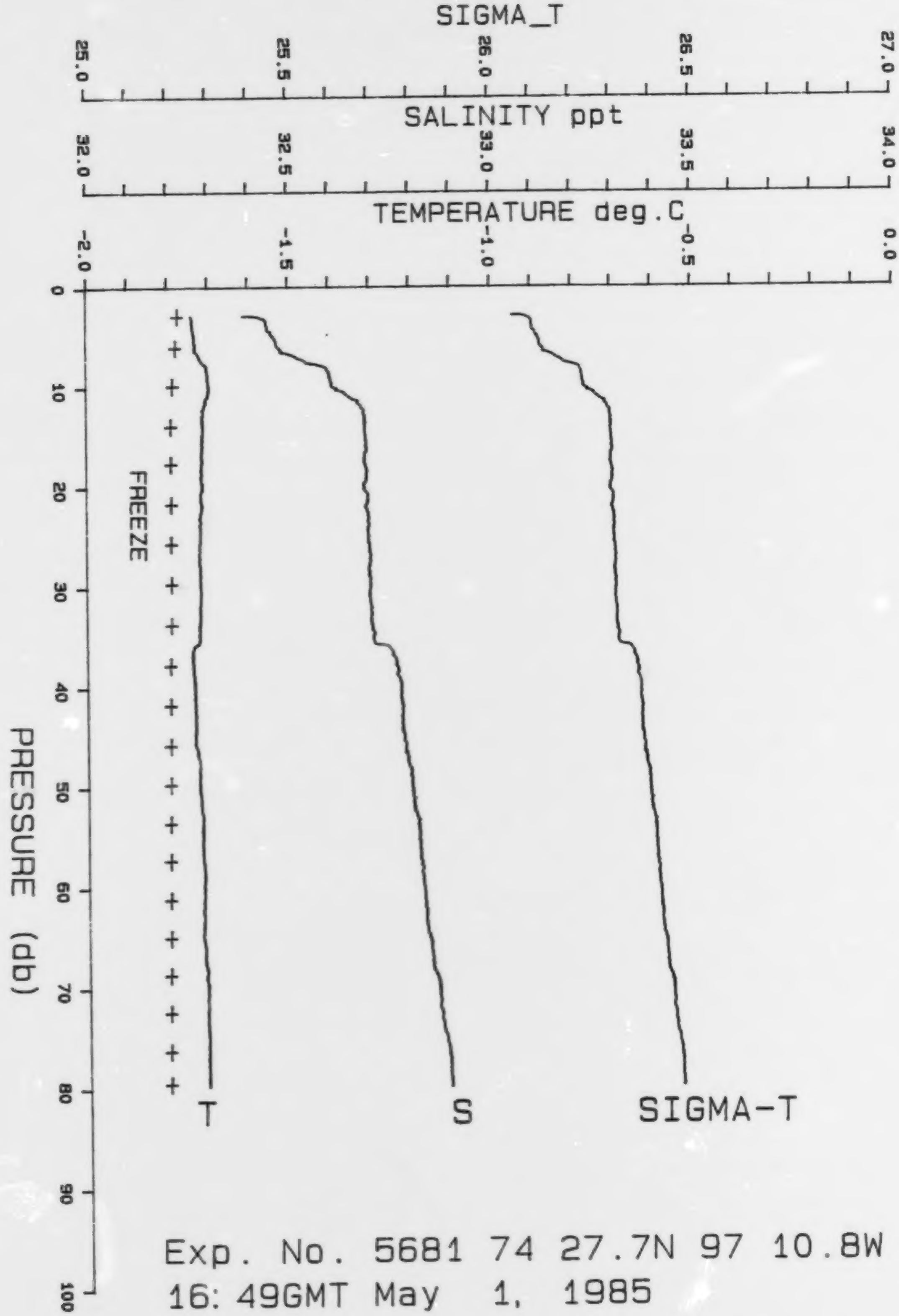


Exp. No. 5680 74 27.7N 97 10.8W
16: 24GMT May 1, 1985

Ice Keel '85 Experiment     Barrow Strait     Exp. No. 5681

Lat. 75 27.7N     Lon. 97 10.8W     DDMMYY 1/ 5/85
Ice Thickness 1.5m     Water Depth 114m     G.M.T. 1649

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.8 | -1.740 | 0.59839 | 32.389 | 26.057 | 1437.5 |
| 3.0 | -1.737 | 0.59915 | 32.431 | 26.091 | 1437.6 |
| 4.0 | -1.736 | 0.59949 | 32.449 | 26.105 | 1437.6 |
| 5.0 | -1.731 | 0.59984 | 32.464 | 26.117 | 1437.7 |
| 6.0 | -1.730 | 0.60008 | 32.476 | 26.128 | 1437.7 |
| 7.0 | -1.719 | 0.60103 | 32.520 | 26.163 | 1437.8 |
| 8.0 | -1.701 | 0.60260 | 32.593 | 26.222 | 1438.0 |
| 9.0 | -1.698 | 0.60279 | 32.600 | 26.228 | 1438.1 |
| 10.0 | -1.696 | 0.60301 | 32.611 | 26.236 | 1438.1 |
| 11.0 | -1.703 | 0.60362 | 32.653 | 26.271 | 1438.2 |
| 12.0 | -1.709 | 0.60395 | 32.680 | 26.292 | 1438.2 |
| 13.0 | -1.713 | 0.60404 | 32.689 | 26.300 | 1438.2 |
| 14.0 | -1.711 | 0.60406 | 32.687 | 26.299 | 1438.2 |
| 15.0 | -1.714 | 0.60408 | 32.691 | 26.302 | 1438.2 |
| 16.0 | -1.715 | 0.60411 | 32.693 | 26.303 | 1438.2 |
| 17.0 | -1.714 | 0.60404 | 32.687 | 26.299 | 1438.2 |
| 18.0 | -1.716 | 0.60409 | 32.692 | 26.303 | 1438.3 |
| 19.0 | -1.718 | 0.60410 | 32.693 | 26.304 | 1438.3 |
| 20.0 | -1.715 | 0.60406 | 32.687 | 26.299 | 1438.3 |
| 21.0 | -1.717 | 0.60415 | 32.694 | 26.304 | 1438.3 |
| 22.0 | -1.715 | 0.60409 | 32.689 | 26.300 | 1438.3 |
| 23.0 | -1.721 | 0.60415 | 32.698 | 26.308 | 1438.3 |
| 24.0 | -1.718 | 0.60416 | 32.694 | 26.304 | 1438.3 |
| 25.0 | -1.719 | 0.60416 | 32.695 | 26.305 | 1438.4 |
| 26.0 | -1.720 | 0.60420 | 32.698 | 26.307 | 1438.4 |
| 27.0 | -1.720 | 0.60425 | 32.700 | 26.309 | 1438.4 |
| 28.0 | -1.719 | 0.60422 | 32.697 | 26.307 | 1438.4 |
| 29.0 | -1.718 | 0.60428 | 32.698 | 26.308 | 1438.4 |
| 30.0 | -1.719 | 0.60430 | 32.700 | 26.309 | 1438.4 |
| 31.0 | -1.718 | 0.60433 | 32.700 | 26.309 | 1438.5 |
| 32.0 | -1.722 | 0.60433 | 32.704 | 26.313 | 1438.5 |
| 33.0 | -1.721 | 0.60434 | 32.703 | 26.312 | 1438.5 |
| 34.0 | -1.722 | 0.60436 | 32.705 | 26.313 | 1438.5 |
| 35.0 | -1.721 | 0.60441 | 32.706 | 26.314 | 1438.5 |
| 37.5 | -1.740 | 0.60509 | 32.766 | 26.363 | 1438.6 |
| 40.0 | -1.735 | 0.60536 | 32.775 | 26.371 | 1438.6 |
| 42.5 | -1.733 | 0.60547 | 32.777 | 26.372 | 1438.7 |
| 45.0 | -1.735 | 0.60558 | 32.784 | 26.378 | 1438.7 |
| 47.5 | -1.723 | 0.60596 | 32.792 | 26.384 | 1438.8 |
| 50.0 | -1.724 | 0.60615 | 32.803 | 26.393 | 1438.9 |
| 55.0 | -1.717 | 0.60654 | 32.816 | 26.403 | 1439.0 |
| 60.0 | -1.714 | 0.60686 | 32.829 | 26.414 | 1439.1 |
| 65.0 | -1.719 | 0.60710 | 32.845 | 26.427 | 1439.2 |
| 70.0 | -1.707 | 0.60768 | 32.864 | 26.442 | 1439.4 |
| 75.0 | -1.707 | 0.60805 | 32.882 | 26.456 | 1439.5 |
| 79.7 | -1.707 | 0.60823 | 32.889 | 26.463 | 1439.6 |

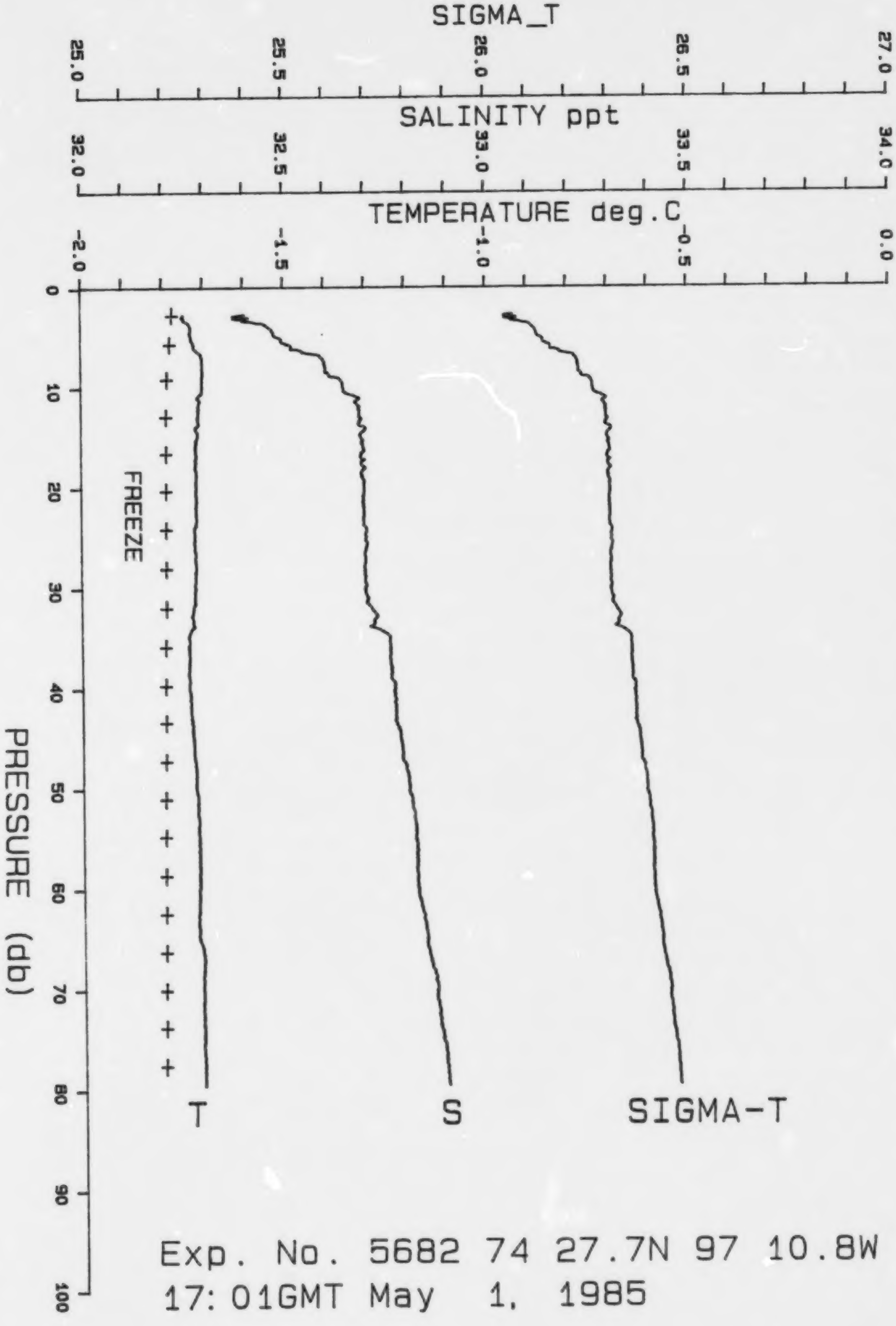


Exp. No. 5681 74 27.7N 97 10.8W
16: 49GMT May 1, 1985

Ice Keel '85 Experiment  Barrow Strait  Exp. No. 5682

Lat. 75 27.7N  Lon. 97 10.8W  DDMMYY 1/ 5/85
Ice Thickness 1.5m  Water Depth 114m  G.M.T. 1701

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.7 | -1.747 | 0.59851 | 32.404 | 26.069 | 1437.5 |
| 3.0 | -1.750 | 0.59864 | 32.414 | 26.077 | 1437.5 |
| 4.0 | -1.729 | 0.59990 | 32.465 | 26.119 | 1437.7 |
| 5.0 | -1.728 | 0.60037 | 32.492 | 26.140 | 1437.7 |
| 6.0 | -1.721 | 0.60099 | 32.520 | 26.163 | 1437.8 |
| 7.0 | -1.701 | 0.60262 | 32.595 | 26.223 | 1438.0 |
| 8.0 | -1.701 | 0.60280 | 32.605 | 26.231 | 1438.0 |
| 9.0 | -1.702 | 0.60334 | 32.637 | 26.258 | 1438.1 |
| 10.0 | -1.701 | 0.60354 | 32.647 | 26.266 | 1438.1 |
| 11.0 | -1.715 | 0.60398 | 32.689 | 26.300 | 1438.1 |
| 12.0 | -1.710 | 0.60402 | 32.685 | 26.297 | 1438.2 |
| 13.0 | -1.714 | 0.60405 | 32.691 | 26.301 | 1438.2 |
| 14.0 | -1.719 | 0.60418 | 32.703 | 26.312 | 1438.2 |
| 15.0 | -1.714 | 0.60410 | 32.692 | 26.303 | 1438.2 |
| 16.0 | -1.719 | 0.60412 | 32.698 | 26.307 | 1438.2 |
| 17.0 | -1.719 | 0.60405 | 32.693 | 26.303 | 1438.2 |
| 18.0 | -1.721 | 0.60419 | 32.703 | 26.311 | 1438.2 |
| 19.0 | -1.717 | 0.60413 | 32.694 | 26.304 | 1438.3 |
| 20.0 | -1.717 | 0.60421 | 32.699 | 26.308 | 1438.3 |
| 21.0 | -1.717 | 0.60419 | 32.696 | 26.306 | 1438.3 |
| 22.0 | -1.716 | 0.60421 | 32.697 | 26.307 | 1438.3 |
| 23.0 | -1.716 | 0.60421 | 32.696 | 26.306 | 1438.3 |
| 24.0 | -1.724 | 0.60423 | 32.705 | 26.314 | 1438.3 |
| 25.0 | -1.720 | 0.60424 | 32.701 | 26.310 | 1438.4 |
| 26.0 | -1.720 | 0.60427 | 32.702 | 26.310 | 1438.4 |
| 27.0 | -1.719 | 0.60427 | 32.700 | 26.309 | 1438.4 |
| 28.0 | -1.718 | 0.60428 | 32.699 | 26.309 | 1438.4 |
| 29.0 | -1.719 | 0.60428 | 32.699 | 26.308 | 1438.4 |
| 30.0 | -1.721 | 0.60429 | 32.701 | 26.310 | 1438.4 |
| 31.0 | -1.721 | 0.60439 | 32.706 | 26.314 | 1438.5 |
| 32.0 | -1.724 | 0.60449 | 32.716 | 26.322 | 1438.5 |
| 33.0 | -1.726 | 0.60459 | 32.723 | 26.328 | 1438.5 |
| 34.0 | -1.731 | 0.60464 | 32.731 | 26.334 | 1438.5 |
| 35.0 | -1.737 | 0.60503 | 32.761 | 26.359 | 1438.5 |
| 37.5 | -1.736 | 0.60506 | 32.759 | 26.358 | 1438.6 |
| 40.0 | -1.738 | 0.60527 | 32.772 | 26.368 | 1438.6 |
| 42.5 | -1.732 | 0.60540 | 32.773 | 26.368 | 1438.7 |
| 45.0 | -1.727 | 0.60572 | 32.784 | 26.377 | 1438.8 |
| 47.5 | -1.723 | 0.60605 | 32.798 | 26.389 | 1438.8 |
| 50.0 | -1.721 | 0.60622 | 32.805 | 26.394 | 1438.9 |
| 55.0 | -1.714 | 0.60664 | 32.819 | 26.406 | 1439.0 |
| 60.0 | -1.718 | 0.60676 | 32.827 | 26.412 | 1439.1 |
| 65.0 | -1.718 | 0.60718 | 32.848 | 26.430 | 1439.2 |
| 70.0 | -1.709 | 0.60776 | 32.871 | 26.448 | 1439.4 |
| 75.0 | -1.708 | 0.60809 | 32.886 | 26.460 | 1439.5 |
| 79.5 | -1.707 | 0.60836 | 32.898 | 26.470 | 1439.6 |

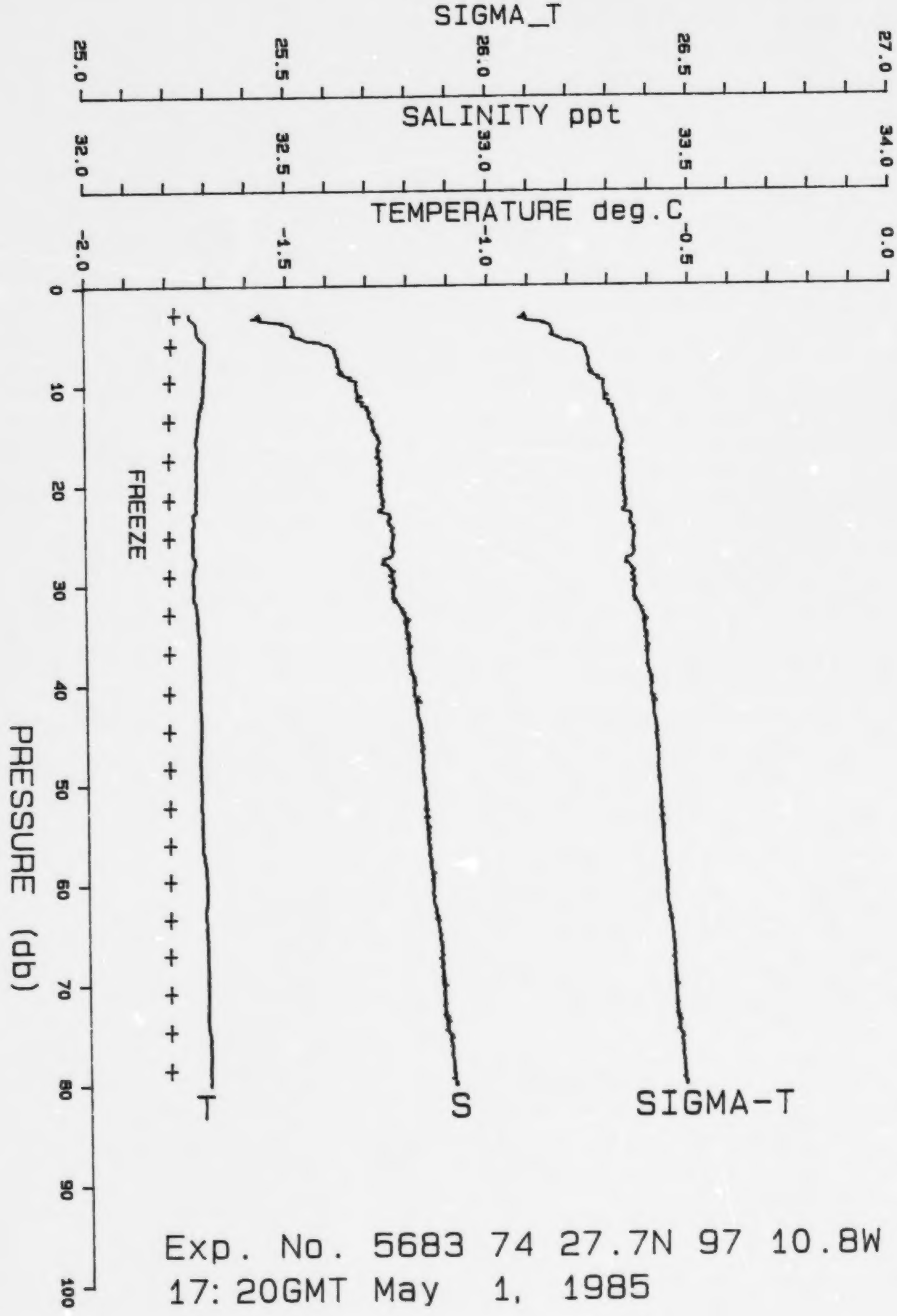


Exp. No. 5682 74 27.7N 97 10.8W
17: 01GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5683

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85
Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1720

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.8 | -1.740 | 0.59915 | 32.434 | 26.093 | 1437.5 |
| 3.0 | -1.739 | 0.59905 | 32.427 | 26.088 | 1437.5 |
| 4.0 | -1.723 | 0.60082 | 32.513 | 26.157 | 1437.8 |
| 5.0 | -1.718 | 0.60099 | 32.517 | 26.161 | 1437.8 |
| 6.0 | -1.700 | 0.60290 | 32.611 | 26.236 | 1438.0 |
| 7.0 | -1.703 | 0.60307 | 32.623 | 26.247 | 1438.0 |
| 8.0 | -1.702 | 0.60317 | 32.628 | 26.250 | 1438.1 |
| 9.0 | -1.704 | 0.60342 | 32.644 | 26.263 | 1438.1 |
| 10.0 | -1.707 | 0.60387 | 32.674 | 26.288 | 1438.1 |
| 11.0 | -1.708 | 0.60395 | 32.680 | 26.292 | 1438.2 |
| 12.0 | -1.710 | 0.60405 | 32.686 | 26.297 | 1438.2 |
| 13.0 | -1.717 | 0.60425 | 32.705 | 26.313 | 1438.2 |
| 14.0 | -1.722 | 0.60432 | 32.715 | 26.321 | 1438.2 |
| 15.0 | -1.725 | 0.60444 | 32.724 | 26.329 | 1438.2 |
| 16.0 | -1.724 | 0.60448 | 32.725 | 26.330 | 1438.2 |
| 17.0 | -1.724 | 0.60452 | 32.726 | 26.331 | 1438.2 |
| 18.0 | -1.725 | 0.60458 | 32.731 | 26.335 | 1438.3 |
| 19.0 | -1.726 | 0.60457 | 32.730 | 26.334 | 1438.3 |
| 20.0 | -1.724 | 0.60455 | 32.727 | 26.331 | 1438.3 |
| 21.0 | -1.725 | 0.60463 | 32.732 | 26.336 | 1438.3 |
| 22.0 | -1.728 | 0.60470 | 32.739 | 26.341 | 1438.3 |
| 23.0 | -1.736 | 0.60484 | 32.755 | 26.354 | 1438.3 |
| 24.0 | -1.734 | 0.60489 | 32.755 | 26.355 | 1438.3 |
| 25.0 | -1.735 | 0.60503 | 32.764 | 26.362 | 1438.4 |
| 26.0 | -1.734 | 0.60492 | 32.757 | 26.355 | 1438.4 |
| 27.0 | -1.735 | 0.60497 | 32.759 | 26.358 | 1438.4 |
| 28.0 | -1.732 | 0.60484 | 32.748 | 26.348 | 1438.4 |
| 29.0 | -1.733 | 0.60488 | 32.751 | 26.351 | 1438.4 |
| 30.0 | -1.734 | 0.60510 | 32.764 | 26.361 | 1438.5 |
| 31.0 | -1.734 | 0.60504 | 32.760 | 26.358 | 1438.5 |
| 32.0 | -1.730 | 0.60538 | 32.775 | 26.371 | 1438.5 |
| 33.0 | -1.725 | 0.60565 | 32.786 | 26.379 | 1438.6 |
| 34.0 | -1.725 | 0.60581 | 32.794 | 26.385 | 1438.6 |
| 35.0 | -1.723 | 0.60596 | 32.800 | 26.391 | 1438.6 |
| 37.5 | -1.722 | 0.60598 | 32.799 | 26.390 | 1438.7 |
| 40.0 | -1.722 | 0.60627 | 32.814 | 26.402 | 1438.7 |
| 42.5 | -1.719 | 0.60638 | 32.817 | 26.404 | 1438.8 |
| 45.0 | -1.719 | 0.60647 | 32.820 | 26.407 | 1438.8 |
| 47.5 | -1.722 | 0.60660 | 32.829 | 26.414 | 1438.9 |
| 50.0 | -1.718 | 0.60670 | 32.830 | 26.415 | 1438.9 |
| 55.0 | -1.718 | 0.60695 | 32.841 | 26.424 | 1439.0 |
| 60.0 | -1.707 | 0.60736 | 32.851 | 26.431 | 1439.2 |
| 65.0 | -1.710 | 0.60770 | 32.871 | 26.448 | 1439.3 |
| 70.0 | -1.705 | 0.60789 | 32.874 | 26.450 | 1439.4 |
| 75.0 | -1.704 | 0.60833 | 32.895 | 26.467 | 1439.5 |
| 80.0 | -1.704 | 0.60852 | 32.903 | 26.474 | 1439.6 |
| 80.1 | -1.704 | 0.60850 | 32.902 | 26.473 | 1439.6 |

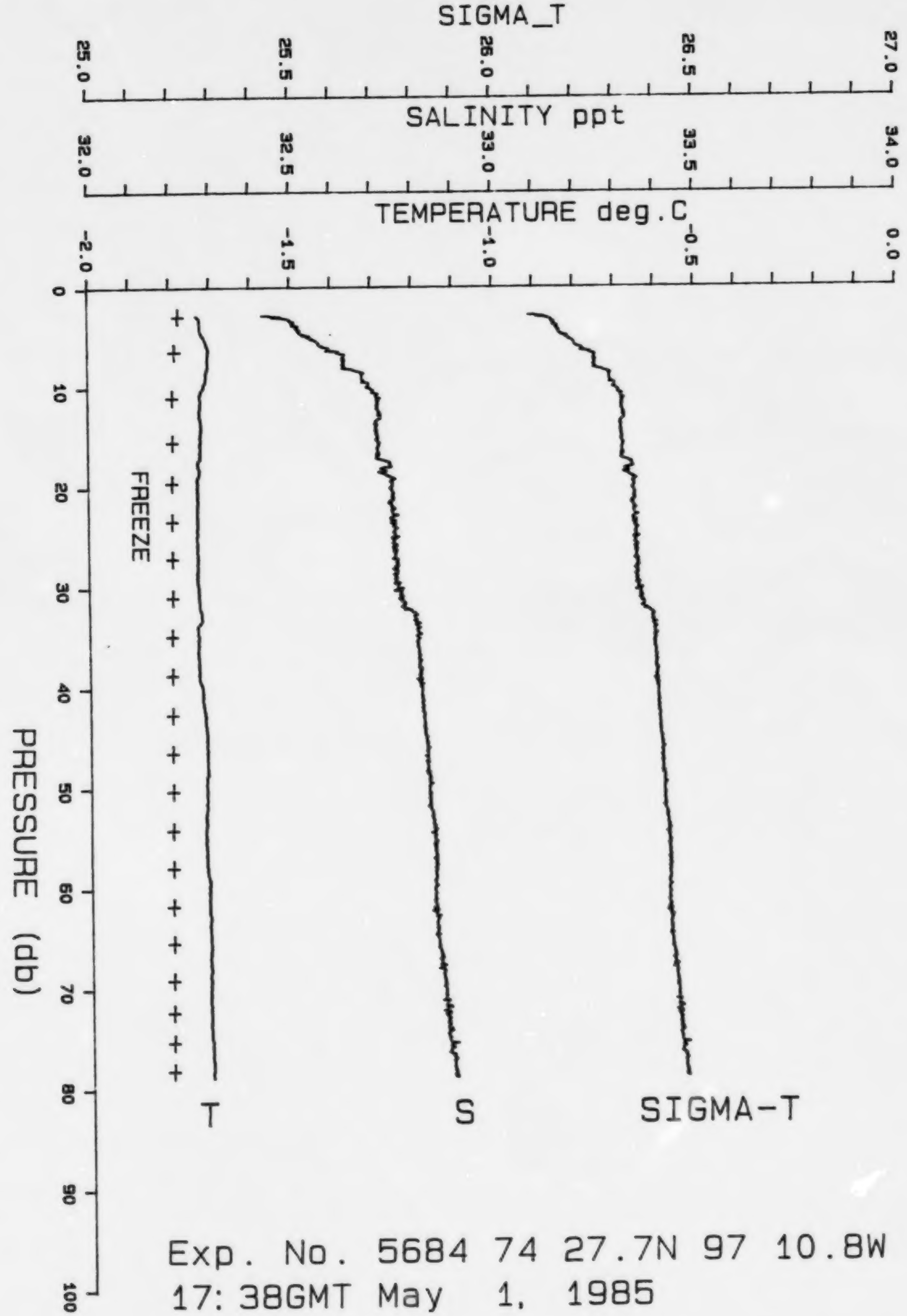


Exp. No. 5683 74 27.7N 97 10.8W
17: 20GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5684

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85
Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1738

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.8 | -1.733 | 0.59924 | 32.431 | 26.091 | 1437.6 |
| 3.0 | -1.724 | 0.59991 | 32.461 | 26.115 | 1437.7 |
| 4.0 | -1.723 | 0.60090 | 32.518 | 26.161 | 1437.8 |
| 5.0 | -1.712 | 0.60159 | 32.546 | 26.184 | 1437.9 |
| 6.0 | -1.702 | 0.60246 | 32.587 | 26.217 | 1438.0 |
| 7.0 | -1.703 | 0.60324 | 32.633 | 26.255 | 1438.1 |
| 8.0 | -1.705 | 0.60327 | 32.637 | 26.258 | 1438.1 |
| 9.0 | -1.709 | 0.60389 | 32.678 | 26.291 | 1438.1 |
| 10.0 | -1.715 | 0.60394 | 32.687 | 26.299 | 1438.1 |
| 11.0 | -1.723 | 0.60428 | 32.715 | 26.322 | 1438.1 |
| 12.0 | -1.724 | 0.60427 | 32.715 | 26.322 | 1438.1 |
| 13.0 | -1.724 | 0.60440 | 32.723 | 26.328 | 1438.2 |
| 14.0 | -1.720 | 0.60428 | 32.710 | 26.318 | 1438.2 |
| 15.0 | -1.724 | 0.60431 | 32.716 | 26.322 | 1438.2 |
| 16.0 | -1.723 | 0.60430 | 32.713 | 26.320 | 1438.2 |
| 17.0 | -1.723 | 0.60432 | 32.714 | 26.321 | 1438.2 |
| 18.0 | -1.727 | 0.60469 | 32.740 | 26.342 | 1438.3 |
| 19.0 | -1.731 | 0.60477 | 32.747 | 26.348 | 1438.3 |
| 20.0 | -1.732 | 0.60469 | 32.744 | 26.345 | 1438.3 |
| 21.0 | -1.733 | 0.60485 | 32.754 | 26.353 | 1438.3 |
| 22.0 | -1.733 | 0.60483 | 32.752 | 26.351 | 1438.3 |
| 23.0 | -1.732 | 0.60475 | 32.746 | 26.346 | 1438.3 |
| 24.0 | -1.733 | 0.60496 | 32.758 | 26.357 | 1438.4 |
| 25.0 | -1.734 | 0.60500 | 32.761 | 26.359 | 1438.4 |
| 26.0 | -1.731 | 0.60496 | 32.755 | 26.354 | 1438.4 |
| 27.0 | -1.730 | 0.60496 | 32.754 | 26.353 | 1438.4 |
| 28.0 | -1.732 | 0.60502 | 32.759 | 26.357 | 1438.4 |
| 29.0 | -1.734 | 0.60500 | 32.759 | 26.357 | 1438.4 |
| 30.0 | -1.731 | 0.60520 | 32.767 | 26.364 | 1438.5 |
| 31.0 | -1.729 | 0.60521 | 32.765 | 26.362 | 1438.5 |
| 32.0 | -1.727 | 0.60552 | 32.780 | 26.375 | 1438.5 |
| 33.0 | -1.723 | 0.60600 | 32.803 | 26.393 | 1438.6 |
| 34.0 | -1.733 | 0.60595 | 32.812 | 26.400 | 1438.6 |
| 35.0 | -1.731 | 0.60606 | 32.815 | 26.403 | 1438.6 |
| 37.5 | -1.733 | 0.60605 | 32.815 | 26.403 | 1438.7 |
| 40.0 | -1.722 | 0.60636 | 32.820 | 26.407 | 1438.8 |
| 42.5 | -1.718 | 0.60655 | 32.826 | 26.411 | 1438.8 |
| 45.0 | -1.714 | 0.60671 | 32.829 | 26.414 | 1438.9 |
| 47.5 | -1.712 | 0.60683 | 32.832 | 26.416 | 1438.9 |
| 50.0 | -1.715 | 0.60685 | 32.835 | 26.418 | 1439.0 |
| 55.0 | -1.717 | 0.60708 | 32.848 | 26.429 | 1439.1 |
| 60.0 | -1.711 | 0.60723 | 32.847 | 26.428 | 1439.2 |
| 65.0 | -1.710 | 0.60746 | 32.856 | 26.436 | 1439.3 |
| 70.0 | -1.711 | 0.60776 | 32.872 | 26.449 | 1439.4 |
| 75.0 | -1.706 | 0.60802 | 32.880 | 26.455 | 1439.5 |
| 78.7 | -1.705 | 0.60843 | 32.900 | 26.471 | 1439.6 |

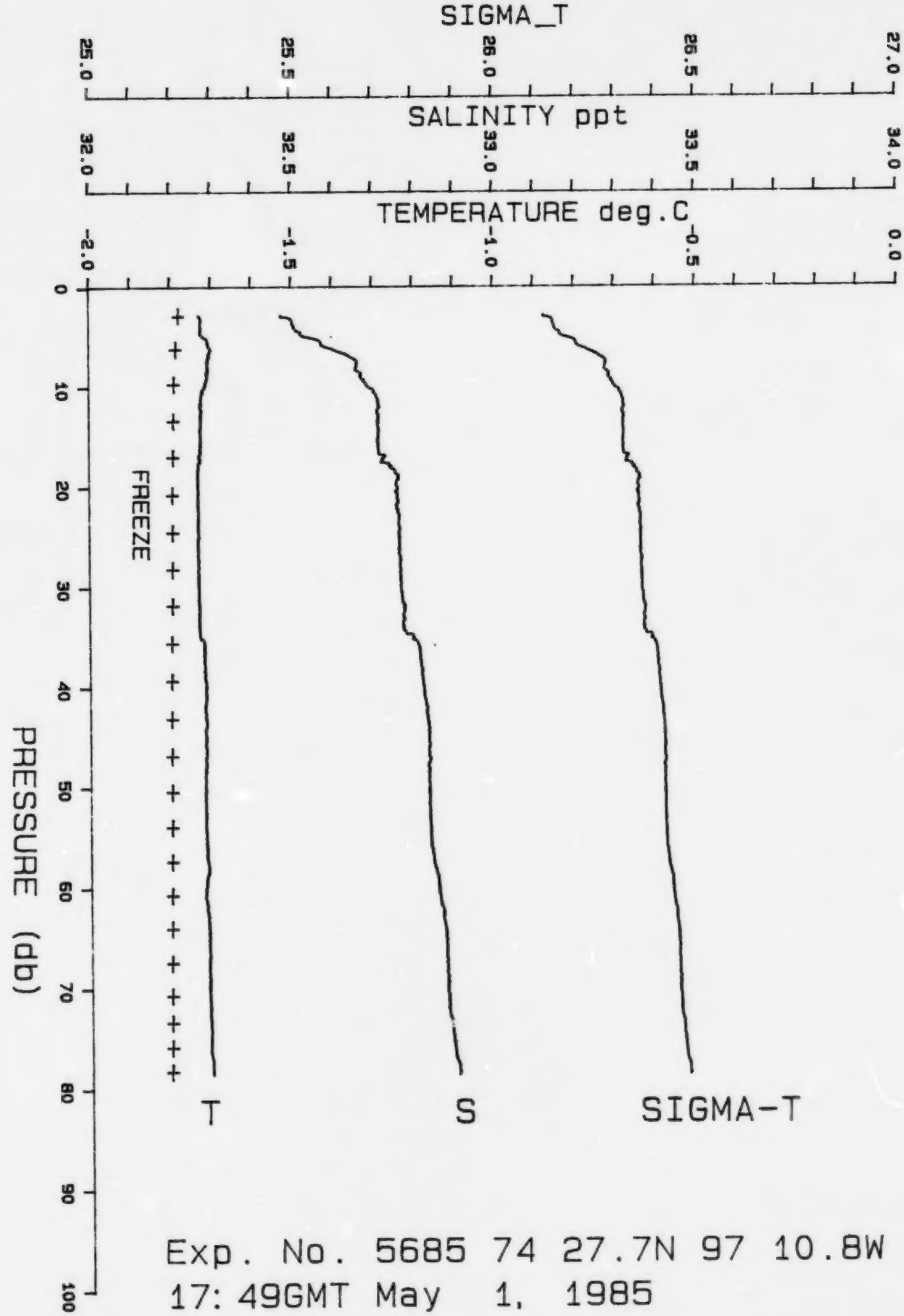


Exp. No. 5684 74 27.7N 97 10.8W
17: 38GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5685

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85
Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1749

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.8 | -1.729 | 0.60005 | 32.475 | 26.127 | 1437.7 |
| 3.0 | -1.726 | 0.60025 | 32.483 | 26.133 | 1437.7 |
| 4.0 | -1.724 | 0.60068 | 32.506 | 26.152 | 1437.7 |
| 5.0 | -1.716 | 0.60141 | 32.541 | 26.180 | 1437.8 |
| 6.0 | -1.703 | 0.60241 | 32.585 | 26.215 | 1438.0 |
| 7.0 | -1.703 | 0.60343 | 32.645 | 26.264 | 1438.1 |
| 8.0 | -1.707 | 0.60362 | 32.660 | 26.276 | 1438.1 |
| 9.0 | -1.708 | 0.60382 | 32.672 | 26.286 | 1438.1 |
| 10.0 | -1.716 | 0.60400 | 32.691 | 26.302 | 1438.1 |
| 11.0 | -1.724 | 0.60420 | 32.712 | 26.319 | 1438.1 |
| 12.0 | -1.727 | 0.60426 | 32.718 | 26.324 | 1438.1 |
| 13.0 | -1.726 | 0.60426 | 32.716 | 26.323 | 1438.2 |
| 14.0 | -1.725 | 0.60426 | 32.715 | 26.321 | 1438.2 |
| 15.0 | -1.725 | 0.60427 | 32.714 | 26.321 | 1438.2 |
| 16.0 | -1.725 | 0.60427 | 32.714 | 26.320 | 1438.2 |
| 17.0 | -1.731 | 0.60443 | 32.729 | 26.333 | 1438.2 |
| 18.0 | -1.732 | 0.60467 | 32.743 | 26.345 | 1438.2 |
| 19.0 | -1.734 | 0.60498 | 32.763 | 26.361 | 1438.3 |
| 20.0 | -1.734 | 0.60495 | 32.761 | 26.359 | 1438.3 |
| 21.0 | -1.732 | 0.60496 | 32.760 | 26.358 | 1438.3 |
| 22.0 | -1.732 | 0.60496 | 32.759 | 26.357 | 1438.3 |
| 23.0 | -1.731 | 0.60510 | 32.765 | 26.362 | 1438.4 |
| 24.0 | -1.733 | 0.60509 | 32.767 | 26.364 | 1438.4 |
| 25.0 | -1.732 | 0.60511 | 32.766 | 26.363 | 1438.4 |
| 26.0 | -1.732 | 0.60512 | 32.765 | 26.362 | 1438.4 |
| 27.0 | -1.731 | 0.60516 | 32.767 | 26.364 | 1438.4 |
| 28.0 | -1.730 | 0.60520 | 32.767 | 26.364 | 1438.4 |
| 29.0 | -1.732 | 0.60519 | 32.768 | 26.364 | 1438.5 |
| 30.0 | -1.731 | 0.60524 | 32.769 | 26.366 | 1438.5 |
| 31.0 | -1.731 | 0.60531 | 32.772 | 26.368 | 1438.5 |
| 32.0 | -1.728 | 0.60541 | 32.775 | 26.370 | 1438.5 |
| 33.0 | -1.729 | 0.60539 | 32.774 | 26.370 | 1438.5 |
| 34.0 | -1.730 | 0.60537 | 32.773 | 26.369 | 1438.6 |
| 35.0 | -1.726 | 0.60590 | 32.800 | 26.391 | 1438.6 |
| 37.5 | -1.718 | 0.60637 | 32.817 | 26.404 | 1438.7 |
| 40.0 | -1.714 | 0.60657 | 32.823 | 26.409 | 1438.8 |
| 42.5 | -1.714 | 0.60670 | 32.830 | 26.415 | 1438.8 |
| 45.0 | -1.714 | 0.60682 | 32.835 | 26.419 | 1438.9 |
| 47.5 | -1.713 | 0.60683 | 32.833 | 26.417 | 1438.9 |
| 50.0 | -1.718 | 0.60684 | 32.837 | 26.421 | 1439.0 |
| 55.0 | -1.714 | 0.60698 | 32.838 | 26.422 | 1439.1 |
| 60.0 | -1.719 | 0.60730 | 32.860 | 26.439 | 1439.1 |
| 65.0 | -1.710 | 0.60778 | 32.876 | 26.452 | 1439.3 |
| 70.0 | -1.709 | 0.60789 | 32.878 | 26.453 | 1439.4 |
| 75.0 | -1.706 | 0.60823 | 32.891 | 26.464 | 1439.5 |
| 78.5 | -1.702 | 0.60859 | 32.906 | 26.476 | 1439.6 |

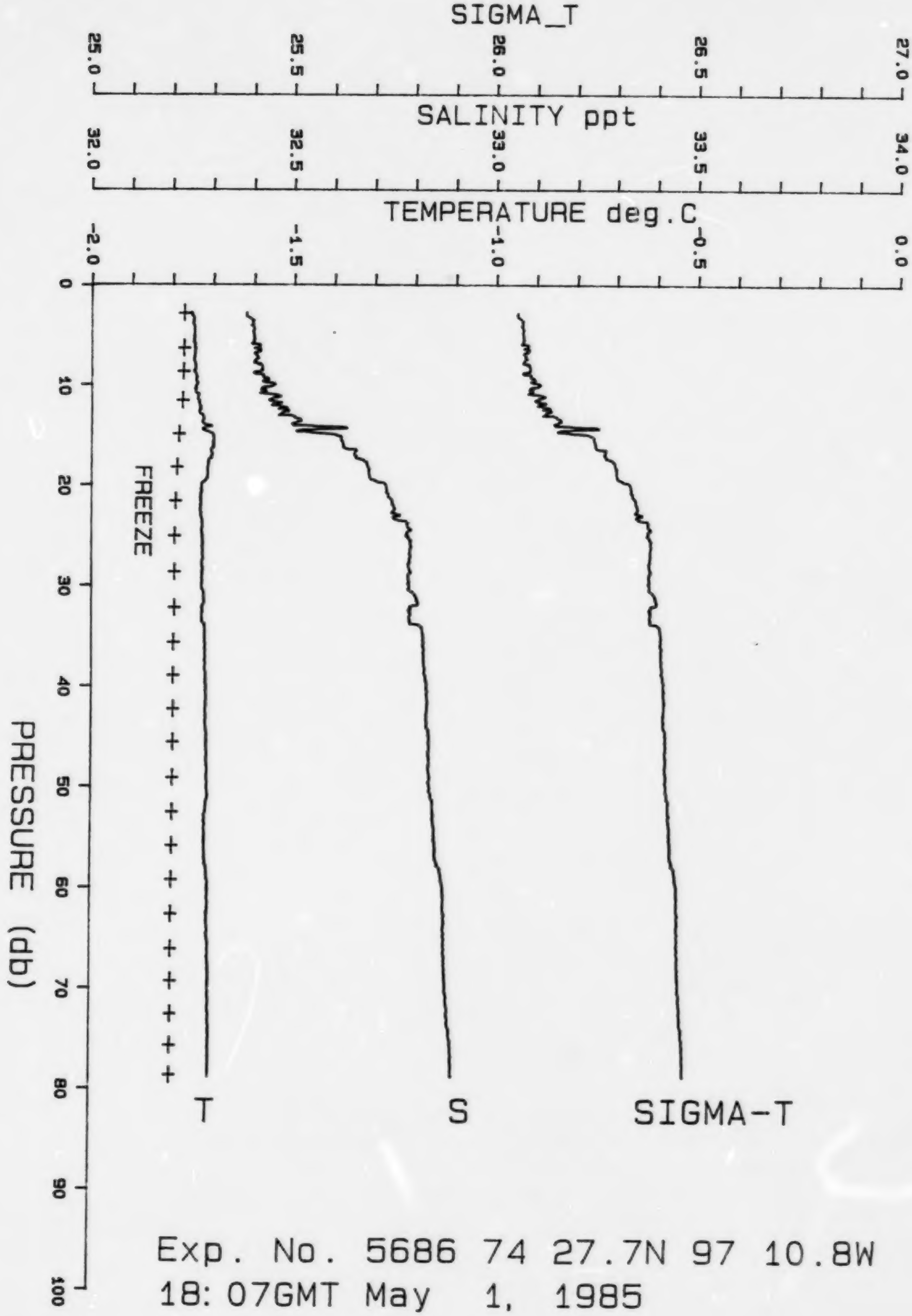


Exp. No. 5685 74 27.7N 97 10.8W
17: 49GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5686

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1807

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.8 | -1.755 | 0.59800 | 32.381 | 26.051 | 1437.4 |
| 3.0 | -1.755 | 0.59799 | 32.381 | 26.050 | 1437.4 |
| 4.0 | -1.750 | 0.59830 | 32.393 | 26.060 | 1437.5 |
| 5.0 | -1.749 | 0.59840 | 32.397 | 26.064 | 1437.5 |
| 6.0 | -1.749 | 0.59870 | 32.414 | 26.078 | 1437.5 |
| 7.0 | -1.747 | 0.59860 | 32.406 | 26.070 | 1437.5 |
| 8.0 | -1.747 | 0.59881 | 32.418 | 26.080 | 1437.6 |
| 9.0 | -1.743 | 0.59897 | 32.423 | 26.084 | 1437.6 |
| 10.0 | -1.743 | 0.59940 | 32.447 | 26.104 | 1437.7 |
| 11.0 | -1.737 | 0.59968 | 32.456 | 26.112 | 1437.7 |
| 12.0 | -1.736 | 0.59959 | 32.450 | 26.106 | 1437.7 |
| 13.0 | -1.728 | 0.60012 | 32.471 | 26.124 | 1437.8 |
| 14.0 | -1.714 | 0.60081 | 32.497 | 26.144 | 1437.9 |
| 15.0 | -1.700 | 0.60293 | 32.607 | 26.233 | 1438.2 |
| 16.0 | -1.700 | 0.60315 | 32.619 | 26.243 | 1438.2 |
| 17.0 | -1.704 | 0.60358 | 32.649 | 26.268 | 1438.2 |
| 18.0 | -1.714 | 0.60395 | 32.681 | 26.294 | 1438.2 |
| 19.0 | -1.716 | 0.60402 | 32.687 | 26.298 | 1438.3 |
| 20.0 | -1.730 | 0.60445 | 32.727 | 26.331 | 1438.3 |
| 21.0 | -1.732 | 0.60451 | 32.732 | 26.336 | 1438.3 |
| 22.0 | -1.733 | 0.60475 | 32.747 | 26.348 | 1438.3 |
| 23.0 | -1.732 | 0.60486 | 32.753 | 26.352 | 1438.3 |
| 24.0 | -1.727 | 0.60544 | 32.781 | 26.375 | 1438.4 |
| 25.0 | -1.728 | 0.60539 | 32.778 | 26.373 | 1438.4 |
| 26.0 | -1.728 | 0.60561 | 32.790 | 26.383 | 1438.5 |
| 27.0 | -1.727 | 0.60561 | 32.788 | 26.381 | 1438.5 |
| 28.0 | -1.728 | 0.60550 | 32.783 | 26.377 | 1438.5 |
| 29.0 | -1.727 | 0.60552 | 32.783 | 26.376 | 1438.5 |
| 30.0 | -1.730 | 0.60555 | 32.787 | 26.380 | 1438.5 |
| 31.0 | -1.725 | 0.60594 | 32.804 | 26.393 | 1438.6 |
| 32.0 | -1.728 | 0.60567 | 32.790 | 26.382 | 1438.6 |
| 33.0 | -1.728 | 0.60558 | 32.785 | 26.378 | 1438.6 |
| 34.0 | -1.721 | 0.60626 | 32.817 | 26.404 | 1438.7 |
| 35.0 | -1.721 | 0.60633 | 32.820 | 26.406 | 1438.7 |
| 37.5 | -1.721 | 0.60640 | 32.823 | 26.409 | 1438.7 |
| 40.0 | -1.718 | 0.60659 | 32.829 | 26.414 | 1438.8 |
| 42.5 | -1.720 | 0.60661 | 32.830 | 26.415 | 1438.8 |
| 45.0 | -1.716 | 0.60679 | 32.836 | 26.419 | 1438.9 |
| 47.5 | -1.717 | 0.60683 | 32.838 | 26.421 | 1438.9 |
| 50.0 | -1.716 | 0.60690 | 32.839 | 26.422 | 1439.0 |
| 55.0 | -1.720 | 0.60706 | 32.850 | 26.431 | 1439.0 |
| 60.0 | -1.713 | 0.60764 | 32.874 | 26.450 | 1439.2 |
| 65.0 | -1.713 | 0.60772 | 32.875 | 26.452 | 1439.3 |
| 70.0 | -1.710 | 0.60789 | 32.879 | 26.454 | 1439.4 |
| 75.0 | -1.707 | 0.60817 | 32.889 | 26.463 | 1439.5 |
| 78.7 | -1.708 | 0.60828 | 32.894 | 26.467 | 1439.5 |

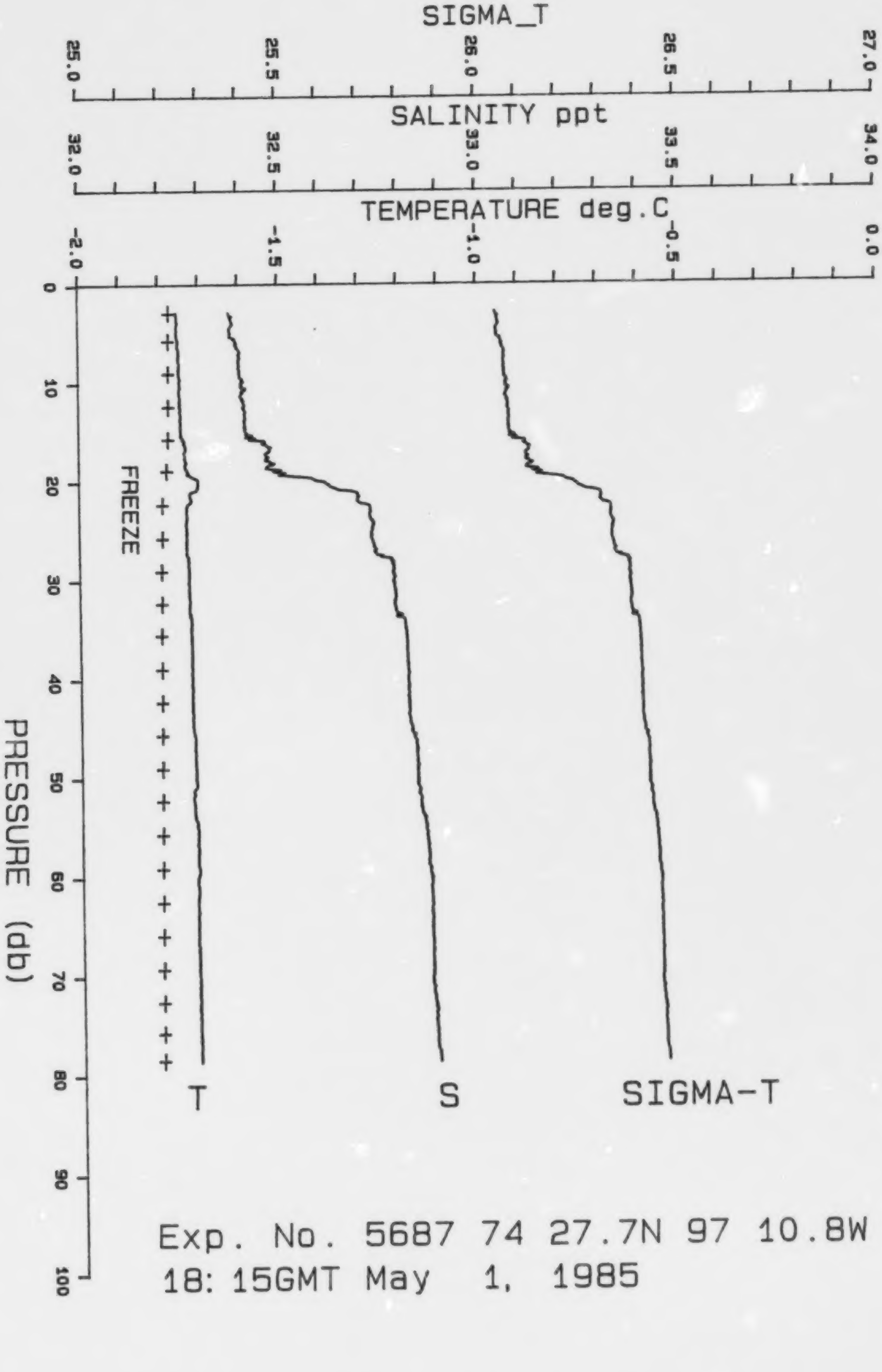


Exp. No. 5686 74 27.7N 97 10.8W
18: 07GMT May 1, 1985

Ice Keel '85 Experiment   Barrow Strait   Exp. No. 5687

Lat. 75 27.7N   Lon. 97 10.8W   DDMMYY 1/ 5/85
Ice Thickness 1.5m   Water Depth 114m   G.M.T. 1815

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.8 | -1.753 | 0.59796 | 32.378 | 26.048 | 1437.4 |
| 3.0 | -1.754 | 0.59800 | 32.380 | 26.050 | 1437.4 |
| 4.0 | -1.752 | 0.59817 | 32.388 | 26.056 | 1437.4 |
| 5.0 | -1.752 | 0.59805 | 32.380 | 26.050 | 1437.4 |
| 6.0 | -1.752 | 0.59834 | 32.396 | 26.063 | 1437.5 |
| 7.0 | -1.747 | 0.59855 | 32.403 | 26.068 | 1437.5 |
| 8.0 | -1.747 | 0.59855 | 32.402 | 26.067 | 1437.6 |
| 9.0 | -1.748 | 0.59856 | 32.403 | 26.069 | 1437.6 |
| 10.0 | -1.746 | 0.59867 | 32.408 | 26.072 | 1437.6 |
| 11.0 | -1.748 | 0.59868 | 32.409 | 26.073 | 1437.6 |
| 12.0 | -1.745 | 0.59883 | 32.414 | 26.077 | 1437.6 |
| 13.0 | -1.746 | 0.59887 | 32.417 | 26.080 | 1437.7 |
| 14.0 | -1.745 | 0.59889 | 32.416 | 26.079 | 1437.7 |
| 15.0 | -1.744 | 0.59900 | 32.421 | 26.083 | 1437.7 |
| 16.0 | -1.735 | 0.59992 | 32.465 | 26.119 | 1437.8 |
| 17.0 | -1.736 | 0.60004 | 32.474 | 26.126 | 1437.8 |
| 18.0 | -1.731 | 0.60023 | 32.479 | 26.130 | 1437.9 |
| 19.0 | -1.726 | 0.60051 | 32.490 | 26.139 | 1437.9 |
| 20.0 | -1.702 | 0.60298 | 32.608 | 26.234 | 1438.2 |
| 21.0 | -1.720 | 0.60383 | 32.679 | 26.292 | 1438.3 |
| 22.0 | -1.722 | 0.60413 | 32.698 | 26.307 | 1438.3 |
| 23.0 | -1.732 | 0.60448 | 32.730 | 26.334 | 1438.3 |
| 24.0 | -1.734 | 0.60453 | 32.734 | 26.337 | 1438.3 |
| 25.0 | -1.731 | 0.60456 | 32.732 | 26.335 | 1438.3 |
| 26.0 | -1.733 | 0.60460 | 32.736 | 26.339 | 1438.4 |
| 27.0 | -1.732 | 0.60469 | 32.739 | 26.341 | 1438.4 |
| 28.0 | -1.726 | 0.60549 | 32.780 | 26.374 | 1438.5 |
| 29.0 | -1.727 | 0.60556 | 32.785 | 26.379 | 1438.5 |
| 30.0 | -1.727 | 0.60556 | 32.784 | 26.378 | 1438.5 |
| 31.0 | -1.726 | 0.60566 | 32.789 | 26.381 | 1438.5 |
| 32.0 | -1.726 | 0.60572 | 32.791 | 26.383 | 1438.6 |
| 33.0 | -1.727 | 0.60572 | 32.791 | 26.383 | 1438.6 |
| 34.0 | -1.722 | 0.60619 | 32.813 | 26.401 | 1438.6 |
| 35.0 | -1.723 | 0.60623 | 32.816 | 26.404 | 1438.7 |
| 37.5 | -1.721 | 0.60633 | 32.818 | 26.405 | 1438.7 |
| 40.0 | -1.722 | 0.60637 | 32.820 | 26.407 | 1438.8 |
| 42.5 | -1.722 | 0.60642 | 32.822 | 26.408 | 1438.8 |
| 45.0 | -1.720 | 0.60661 | 32.829 | 26.414 | 1438.9 |
| 47.5 | -1.714 | 0.60690 | 32.839 | 26.422 | 1438.9 |
| 50.0 | -1.713 | 0.60694 | 32.839 | 26.422 | 1439.0 |
| 55.0 | -1.711 | 0.60740 | 32.860 | 26.439 | 1439.1 |
| 60.0 | -1.714 | 0.60765 | 32.875 | 26.452 | 1439.2 |
| 65.0 | -1.711 | 0.60769 | 32.871 | 26.448 | 1439.3 |
| 70.0 | -1.709 | 0.60779 | 32.872 | 26.449 | 1439.4 |
| 75.0 | -1.709 | 0.60800 | 32.882 | 26.457 | 1439.5 |
| 78.6 | -1.710 | 0.60817 | 32.890 | 26.463 | 1439.5 |

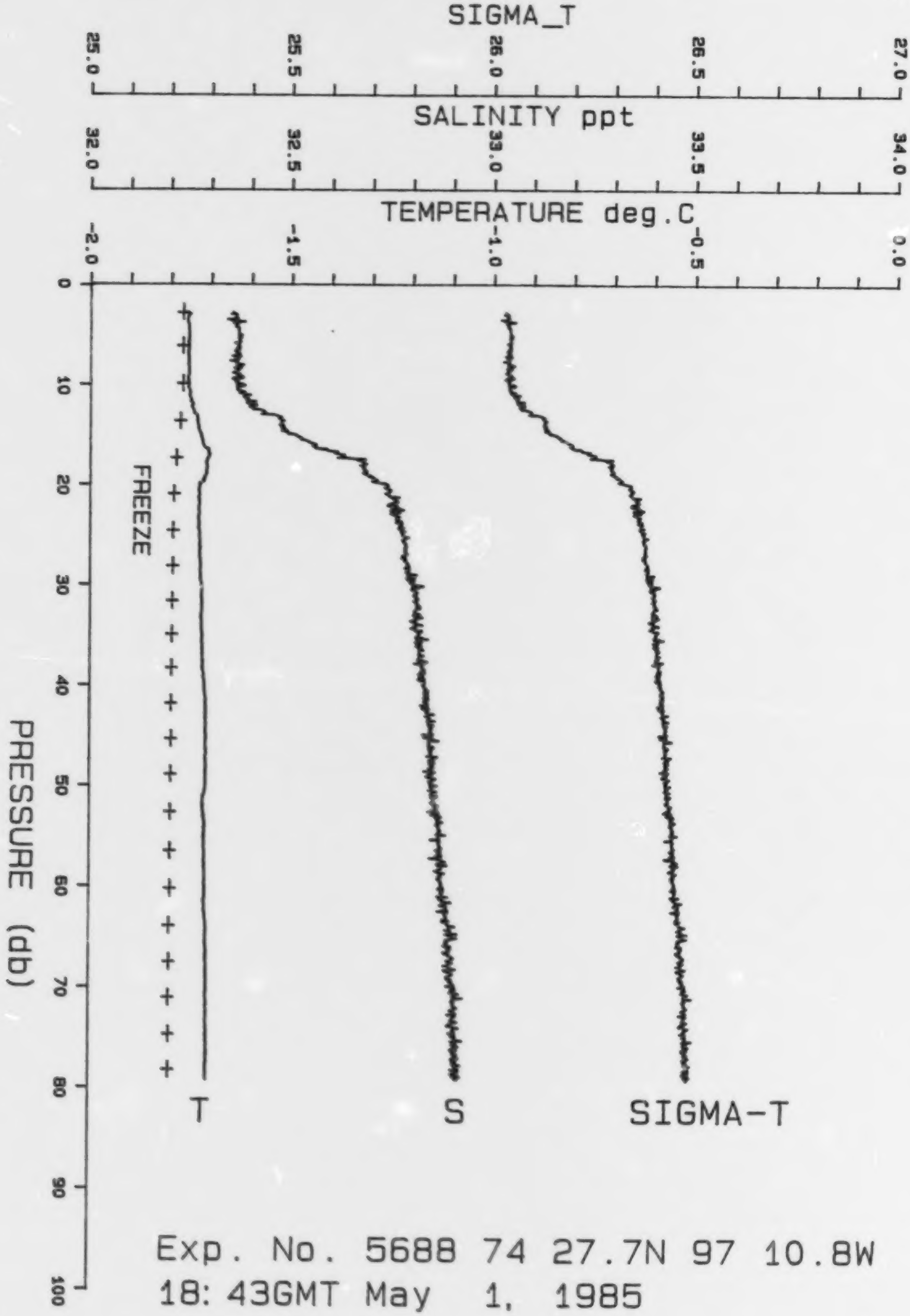


Exp. No. 5687 74 27.7N 97 10.8W
18: 15GMT May 1, 1985

Ice Keel '85 Experiment Barrow Strait Exp. No. 5688

Lat. 75 27.7N Lon. 97 10.8W DDMMYY 1/ 5/85
Ice Thickness 1.5m Water Depth 114m G.M.T. 1843

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.7 | -1.763 | 0.59736 | 32.352 | 26.027 | 1437.3 |
| 3.0 | -1.756 | 0.59756 | 32.357 | 26.031 | 1437.4 |
| 4.0 | -1.758 | 0.59759 | 32.359 | 26.033 | 1437.4 |
| 5.0 | -1.758 | 0.59777 | 32.369 | 26.041 | 1437.4 |
| 6.0 | -1.759 | 0.59771 | 32.366 | 26.039 | 1437.4 |
| 7.0 | -1.759 | 0.59764 | 32.362 | 26.035 | 1437.4 |
| 8.0 | -1.759 | 0.59771 | 32.365 | 26.038 | 1437.4 |
| 9.0 | -1.757 | 0.59776 | 32.366 | 26.039 | 1437.5 |
| 10.0 | -1.758 | 0.59783 | 32.370 | 26.042 | 1437.5 |
| 11.0 | -1.756 | 0.59797 | 32.376 | 26.046 | 1437.5 |
| 12.0 | -1.746 | 0.59870 | 32.408 | 26.072 | 1437.6 |
| 13.0 | -1.737 | 0.59933 | 32.434 | 26.094 | 1437.7 |
| 14.0 | -1.733 | 0.59999 | 32.469 | 26.122 | 1437.8 |
| 15.0 | -1.725 | 0.60081 | 32.508 | 26.153 | 1437.9 |
| 16.0 | -1.721 | 0.60170 | 32.556 | 26.192 | 1438.0 |
| 17.0 | -1.707 | 0.60315 | 32.627 | 26.249 | 1438.2 |
| 18.0 | -1.712 | 0.60386 | 32.674 | 26.288 | 1438.2 |
| 19.0 | -1.715 | 0.60405 | 32.688 | 26.299 | 1438.3 |
| 20.0 | -1.728 | 0.60464 | 32.737 | 26.339 | 1438.3 |
| 21.0 | -1.729 | 0.60463 | 32.736 | 26.339 | 1438.3 |
| 22.0 | -1.730 | 0.60484 | 32.750 | 26.350 | 1438.3 |
| 23.0 | -1.730 | 0.60490 | 32.753 | 26.352 | 1438.3 |
| 24.0 | -1.730 | 0.60519 | 32.770 | 26.366 | 1438.4 |
| 25.0 | -1.729 | 0.60528 | 32.773 | 26.368 | 1438.4 |
| 26.0 | -1.729 | 0.60543 | 32.781 | 26.375 | 1438.4 |
| 27.0 | -1.729 | 0.60534 | 32.775 | 26.371 | 1438.4 |
| 28.0 | -1.727 | 0.60552 | 32.782 | 26.376 | 1438.5 |
| 29.0 | -1.726 | 0.60568 | 32.790 | 26.383 | 1438.5 |
| 30.0 | -1.724 | 0.60602 | 32.808 | 26.397 | 1438.6 |
| 31.0 | -1.725 | 0.60587 | 32.799 | 26.390 | 1438.6 |
| 32.0 | -1.725 | 0.60598 | 32.805 | 26.395 | 1438.6 |
| 33.0 | -1.724 | 0.60593 | 32.800 | 26.391 | 1438.6 |
| 34.0 | -1.724 | 0.60606 | 32.808 | 26.397 | 1438.6 |
| 35.0 | -1.722 | 0.60618 | 32.812 | 26.400 | 1438.7 |
| 37.5 | -1.723 | 0.60618 | 32.811 | 26.400 | 1438.7 |
| 40.0 | -1.716 | 0.60660 | 32.828 | 26.413 | 1438.8 |
| 42.5 | -1.714 | 0.60679 | 32.835 | 26.418 | 1438.9 |
| 45.0 | -1.711 | 0.60704 | 32.845 | 26.427 | 1438.9 |
| 47.5 | -1.712 | 0.60691 | 32.837 | 26.420 | 1438.9 |
| 50.0 | -1.714 | 0.60703 | 32.844 | 26.426 | 1439.0 |
| 55.0 | -1.715 | 0.60739 | 32.864 | 26.443 | 1439.1 |
| 60.0 | -1.715 | 0.60752 | 32.869 | 26.446 | 1439.2 |
| 65.0 | -1.713 | 0.60807 | 32.896 | 26.468 | 1439.3 |
| 70.0 | -1.709 | 0.60822 | 32.897 | 26.469 | 1439.4 |
| 75.0 | -1.709 | 0.60836 | 32.902 | 26.473 | 1439.5 |
| 79.1 | -1.708 | 0.60853 | 32.909 | 26.479 | 1439.6 |

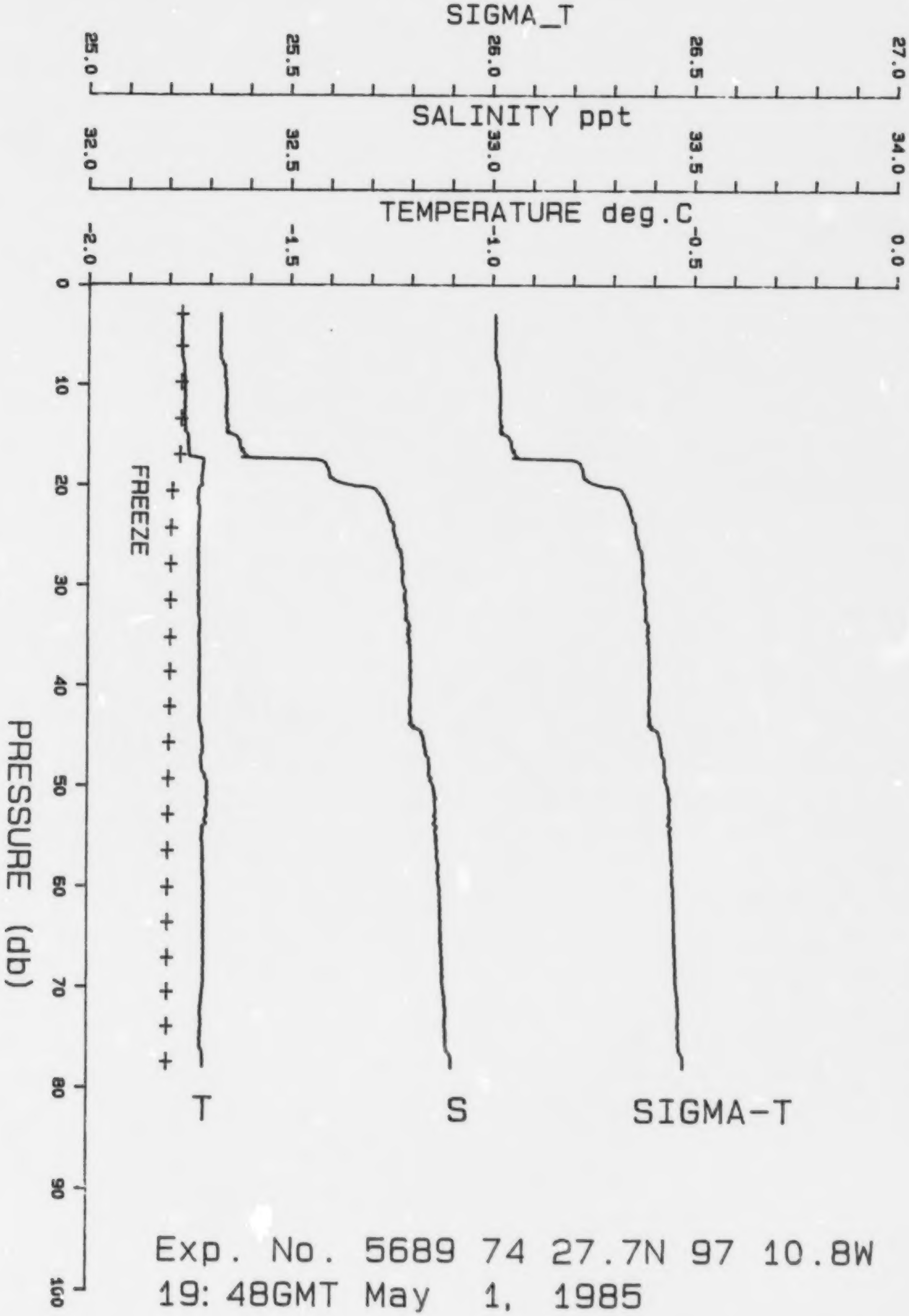


Exp. No. 5688 74 27.7N 97 10.8W
18: 43GMT May 1, 1985

Ice Keel '85 Experiment    Barrow Strait    Exp. No. 5689

Lat. 75 27.7N    Lon. 97 10.8W    DDMMYY 1/ 5/85
Ice Thickness 1.5m    Water Depth 114m    G.M.T. 1948

| pressure (dbars) | temp (deg.c) | conduc r | salinity | sigmat (kg/m**3) | sound (m/s) |
|---|---|---|---|---|---|
| 2.9 | -1.771 | 0.59676 | 32.326 | 26.006 | 1437.2 |
| 3.0 | -1.771 | 0.59676 | 32.325 | 26.005 | 1437.2 |
| 4.0 | -1.770 | 0.59678 | 32.325 | 26.006 | 1437.3 |
| 5.0 | -1.770 | 0.59680 | 32.325 | 26.005 | 1437.3 |
| 6.0 | -1.772 | 0.59680 | 32.327 | 26.007 | 1437.3 |
| 7.0 | -1.769 | 0.59684 | 32.325 | 26.006 | 1437.3 |
| 8.0 | -1.763 | 0.59713 | 32.335 | 26.014 | 1437.4 |
| 9.0 | -1.763 | 0.59718 | 32.338 | 26.016 | 1437.4 |
| 10.0 | -1.762 | 0.59723 | 32.339 | 26.016 | 1437.4 |
| 11.0 | -1.761 | 0.59728 | 32.341 | 26.018 | 1437.4 |
| 12.0 | -1.764 | 0.59725 | 32.341 | 26.019 | 1437.4 |
| 13.0 | -1.761 | 0.59727 | 32.339 | 26.017 | 1437.5 |
| 14.0 | -1.763 | 0.59737 | 32.346 | 26.022 | 1437.5 |
| 15.0 | -1.753 | 0.59779 | 32.360 | 26.033 | 1437.6 |
| 16.0 | -1.753 | 0.59807 | 32.375 | 26.046 | 1437.6 |
| 17.0 | -1.749 | 0.59838 | 32.389 | 26.057 | 1437.7 |
| 18.0 | -1.716 | 0.60233 | 32.587 | 26.218 | 1438.1 |
| 19.0 | -1.718 | 0.60241 | 32.593 | 26.222 | 1438.1 |
| 20.0 | -1.718 | 0.60343 | 32.654 | 26.271 | 1438.2 |
| 21.0 | -1.728 | 0.60439 | 32.721 | 26.326 | 1438.3 |
| 22.0 | -1.727 | 0.60468 | 32.736 | 26.339 | 1438.3 |
| 23.0 | -1.725 | 0.60484 | 32.743 | 26.344 | 1438.4 |
| 24.0 | -1.728 | 0.60499 | 32.754 | 26.353 | 1438.4 |
| 25.0 | -1.728 | 0.60503 | 32.757 | 26.356 | 1438.4 |
| 26.0 | -1.727 | 0.60519 | 32.764 | 26.362 | 1438.4 |
| 27.0 | -1.728 | 0.60532 | 32.773 | 26.369 | 1438.4 |
| 28.0 | -1.727 | 0.60541 | 32.776 | 26.371 | 1438.5 |
| 29.0 | -1.727 | 0.60543 | 32.776 | 26.371 | 1438.5 |
| 30.0 | -1.728 | 0.60546 | 32.780 | 26.374 | 1438.5 |
| 31.0 | -1.727 | 0.60553 | 32.782 | 26.376 | 1438.5 |
| 32.0 | -1.727 | 0.60563 | 32.787 | 26.380 | 1438.6 |
| 33.0 | -1.726 | 0.60566 | 32.787 | 26.380 | 1438.6 |
| 34.0 | -1.725 | 0.60582 | 32.795 | 26.387 | 1438.6 |
| 35.0 | -1.727 | 0.60574 | 32.792 | 26.384 | 1438.6 |
| 37.5 | -1.726 | 0.60590 | 32.798 | 26.389 | 1438.7 |
| 40.0 | -1.725 | 0.60595 | 32.799 | 26.389 | 1438.7 |
| 42.5 | -1.723 | 0.60595 | 32.795 | 26.387 | 1438.8 |
| 45.0 | -1.718 | 0.60666 | 32.830 | 26.415 | 1438.9 |
| 47.5 | -1.719 | 0.60688 | 32.843 | 26.425 | 1438.9 |
| 50.0 | -1.704 | 0.60737 | 32.854 | 26.434 | 1439.0 |
| 55.0 | -1.716 | 0.60731 | 32.860 | 26.439 | 1439.1 |
| 60.0 | -1.713 | 0.60760 | 32.871 | 26.448 | 1439.2 |
| 65.0 | -1.711 | 0.60772 | 32.872 | 26.449 | 1439.3 |
| 70.0 | -1.712 | 0.60785 | 32.879 | 26.454 | 1439.4 |
| 75.0 | -1.721 | 0.60789 | 32.887 | 26.461 | 1439.4 |
| 77.9 | -1.714 | 0.60826 | 32.901 | 26.472 | 1439.5 |

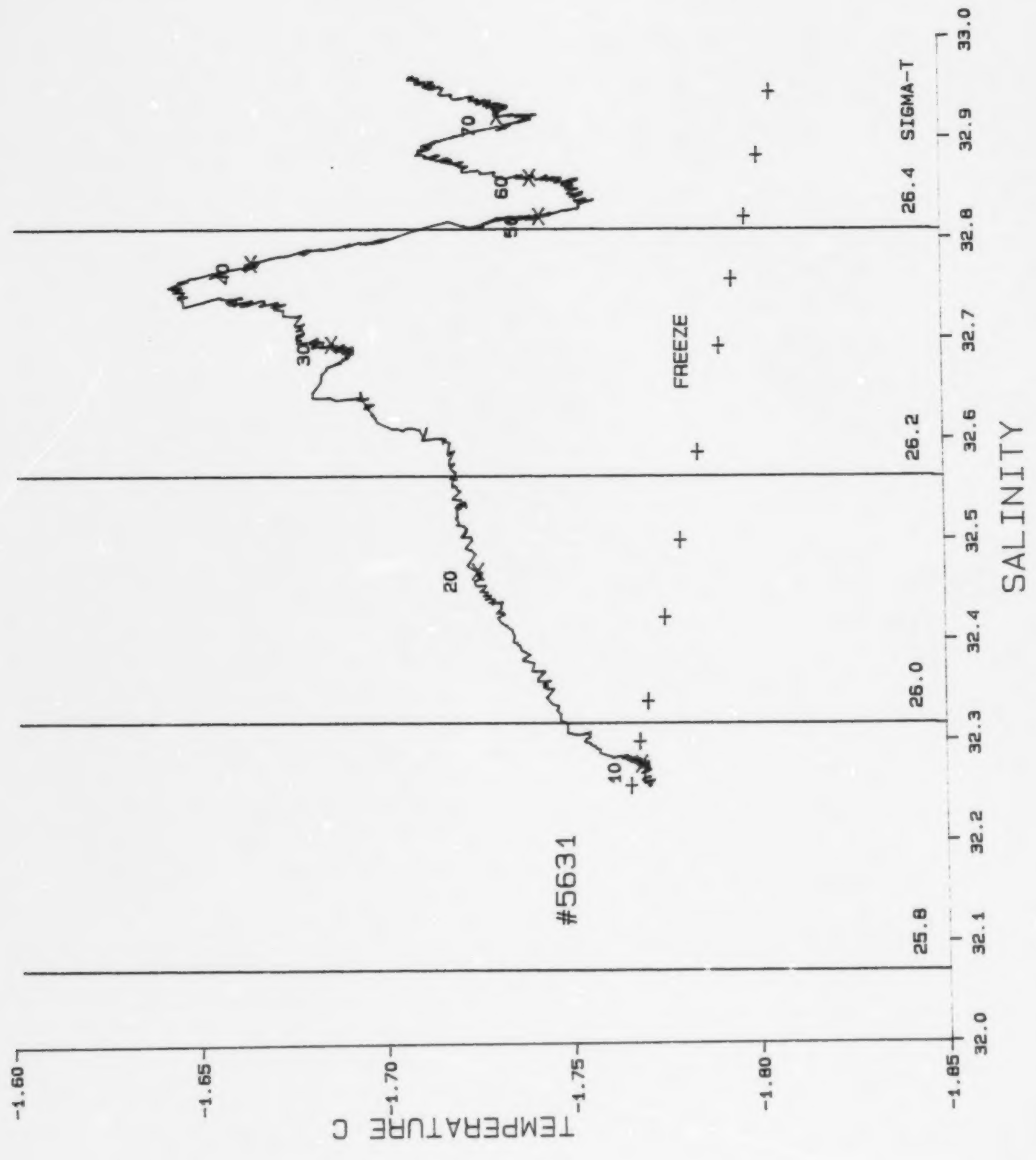


Exp. No. 5689 74 27.7N 97 10.8W
19: 48GMT May 1, 1985

# Appendix 3

## CTD temperature-salinity (TS) plots

# T-S PLOT FOR EXP. No. 5631



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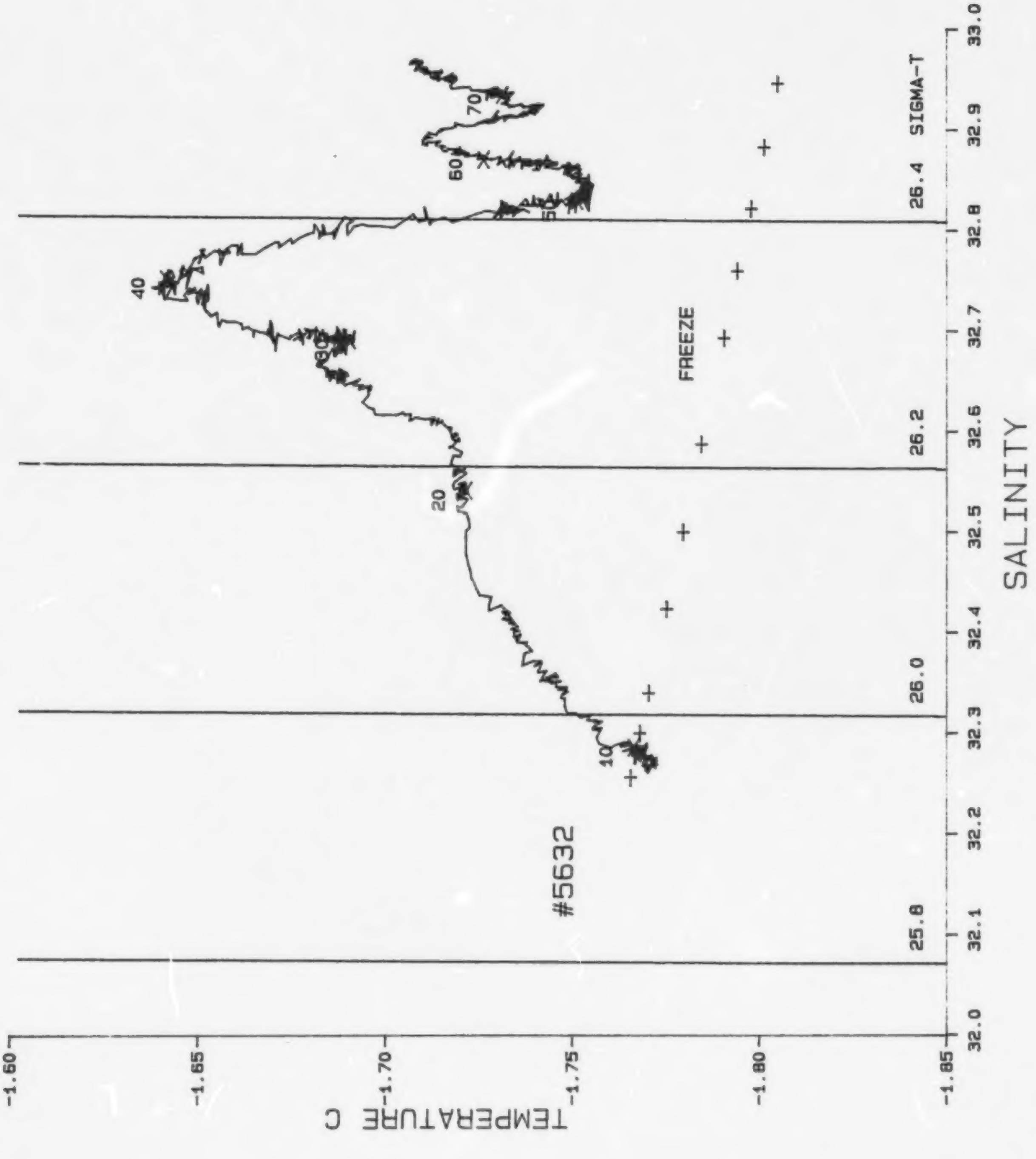

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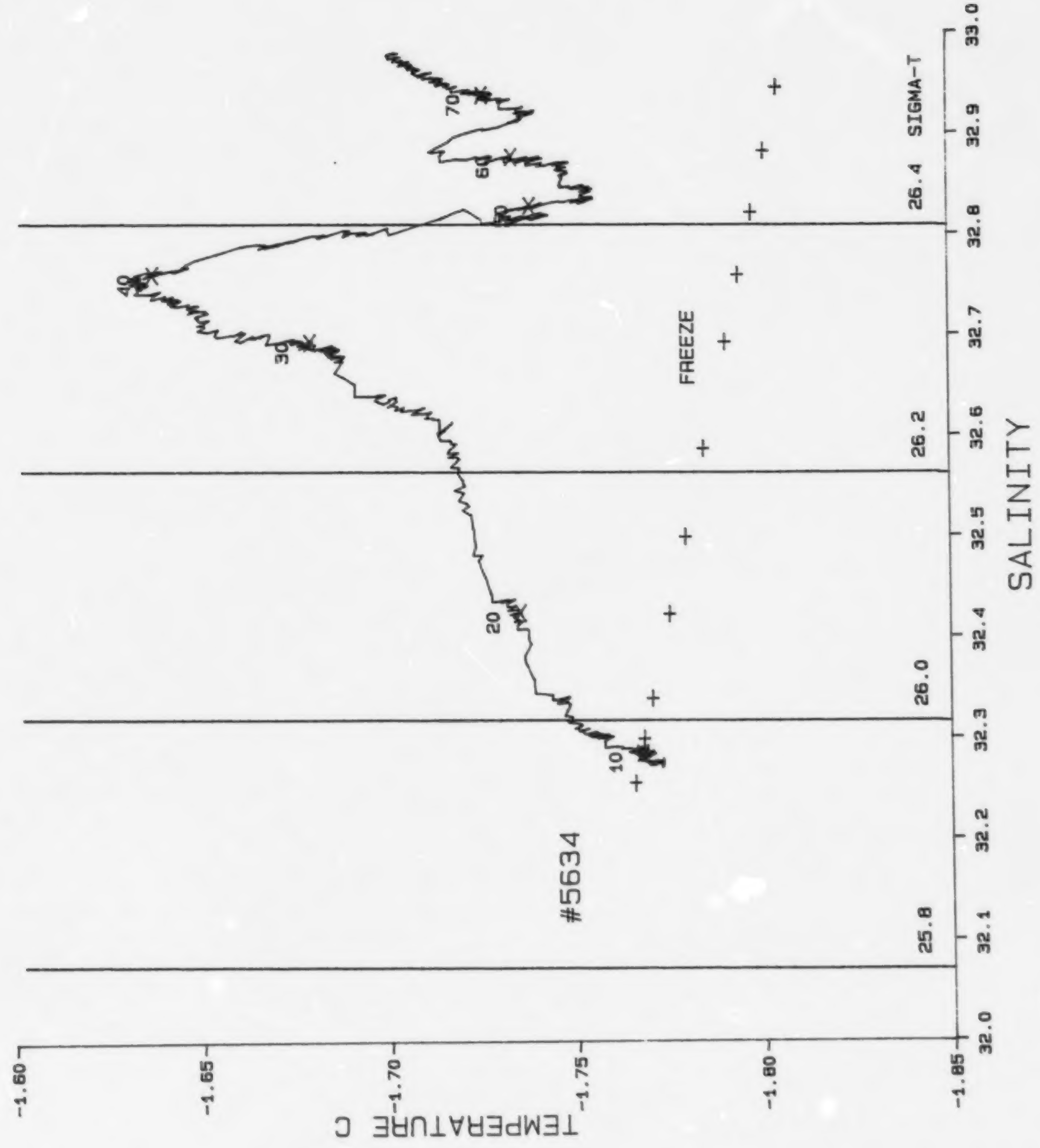

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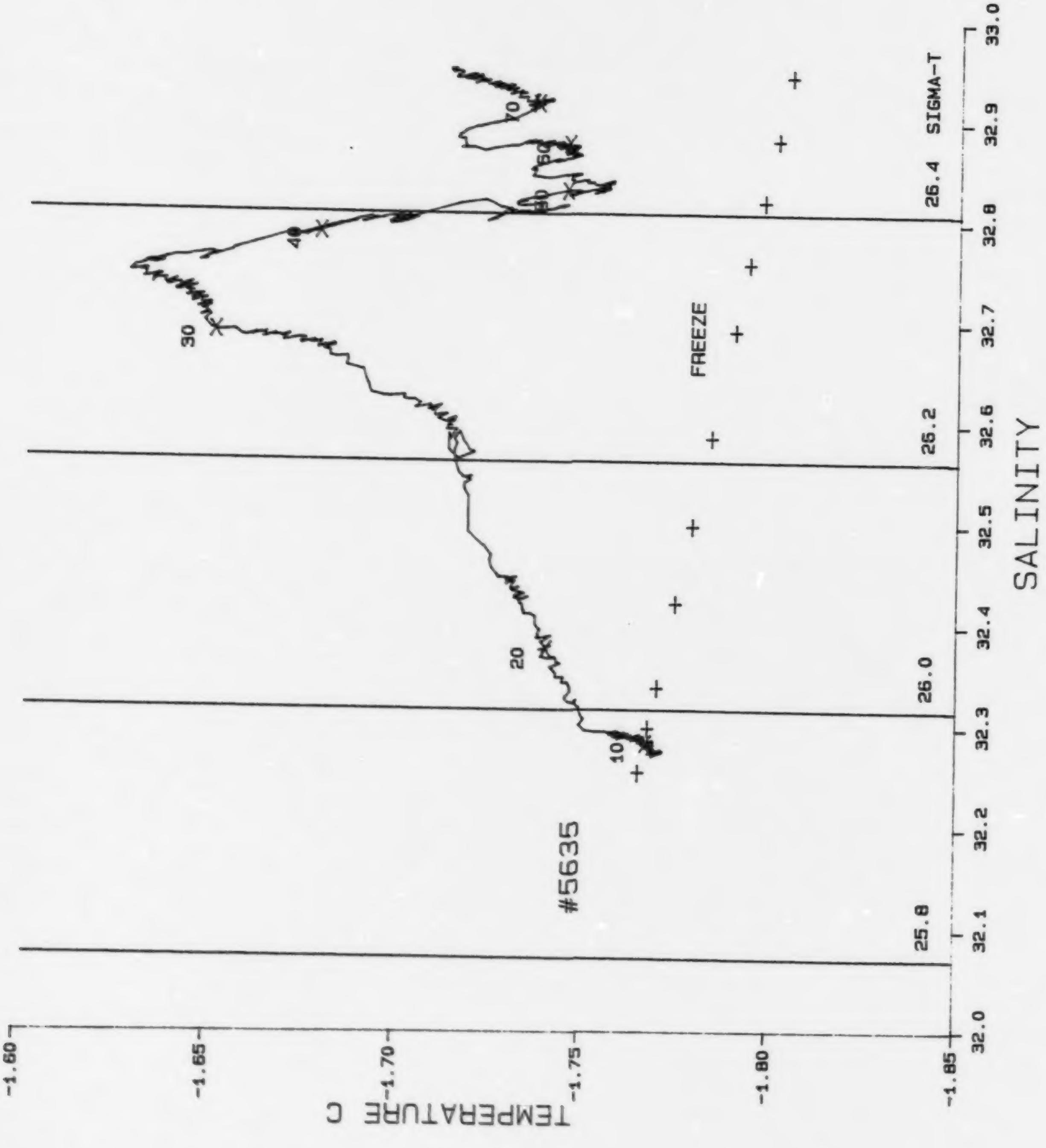

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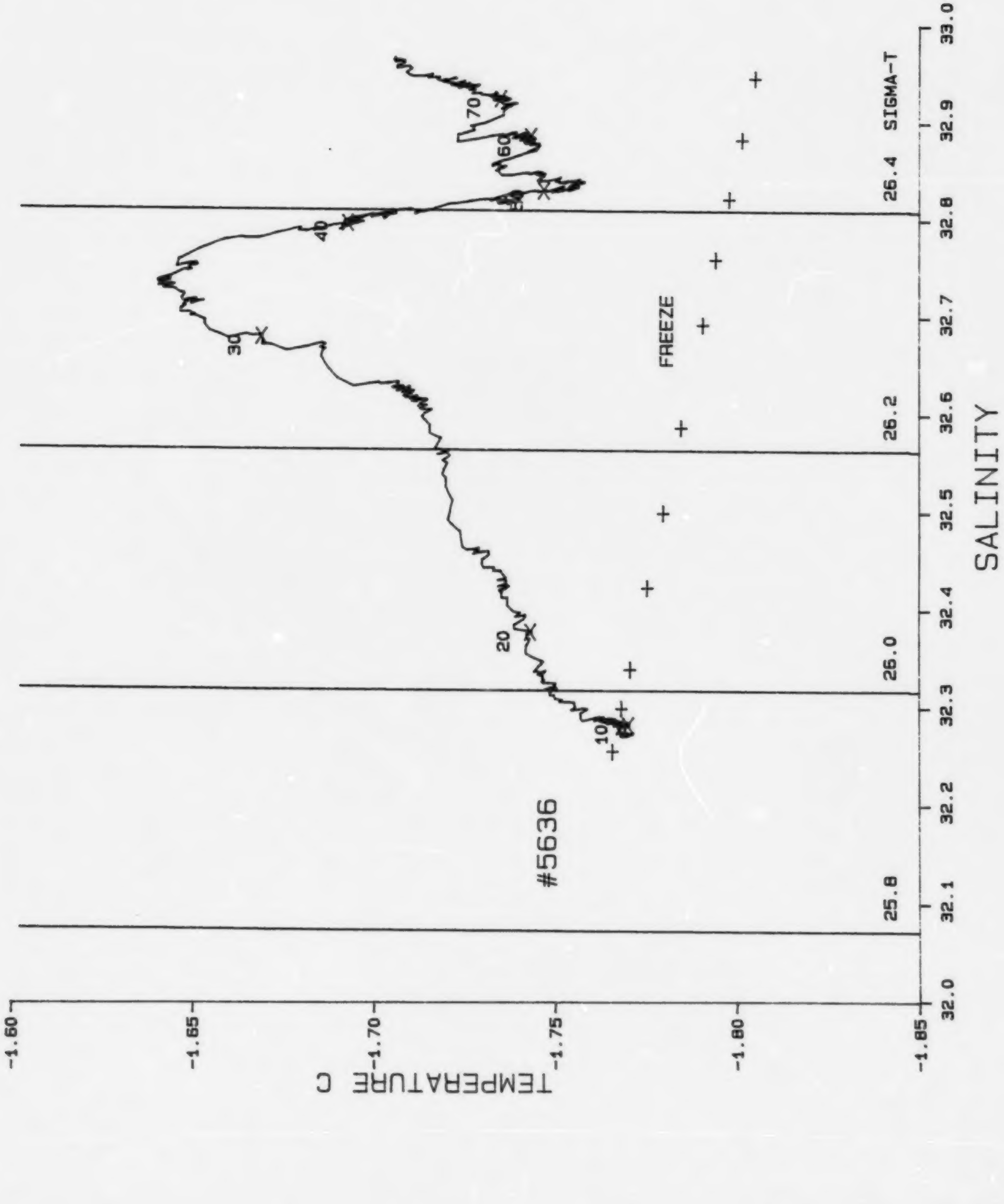
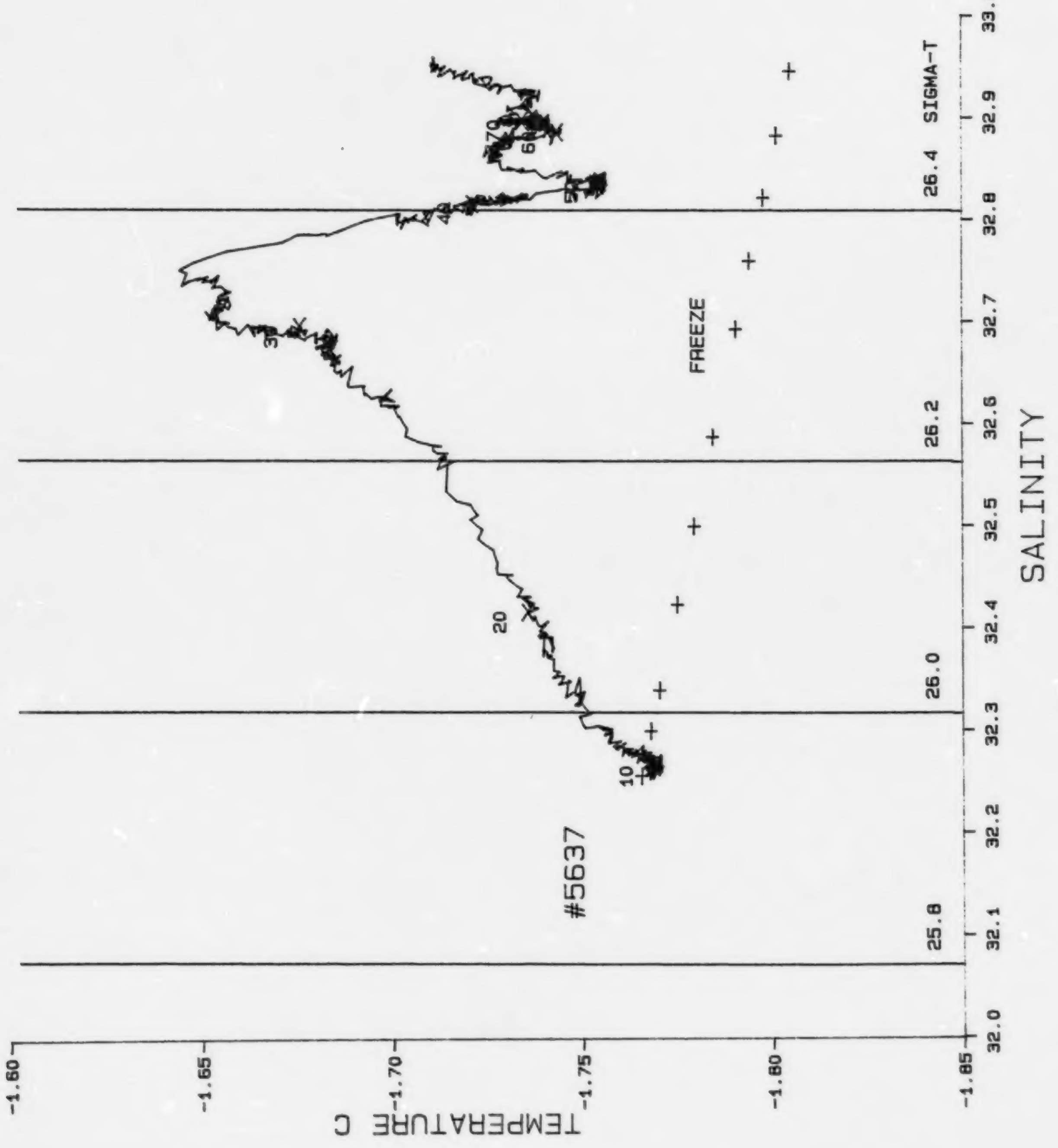
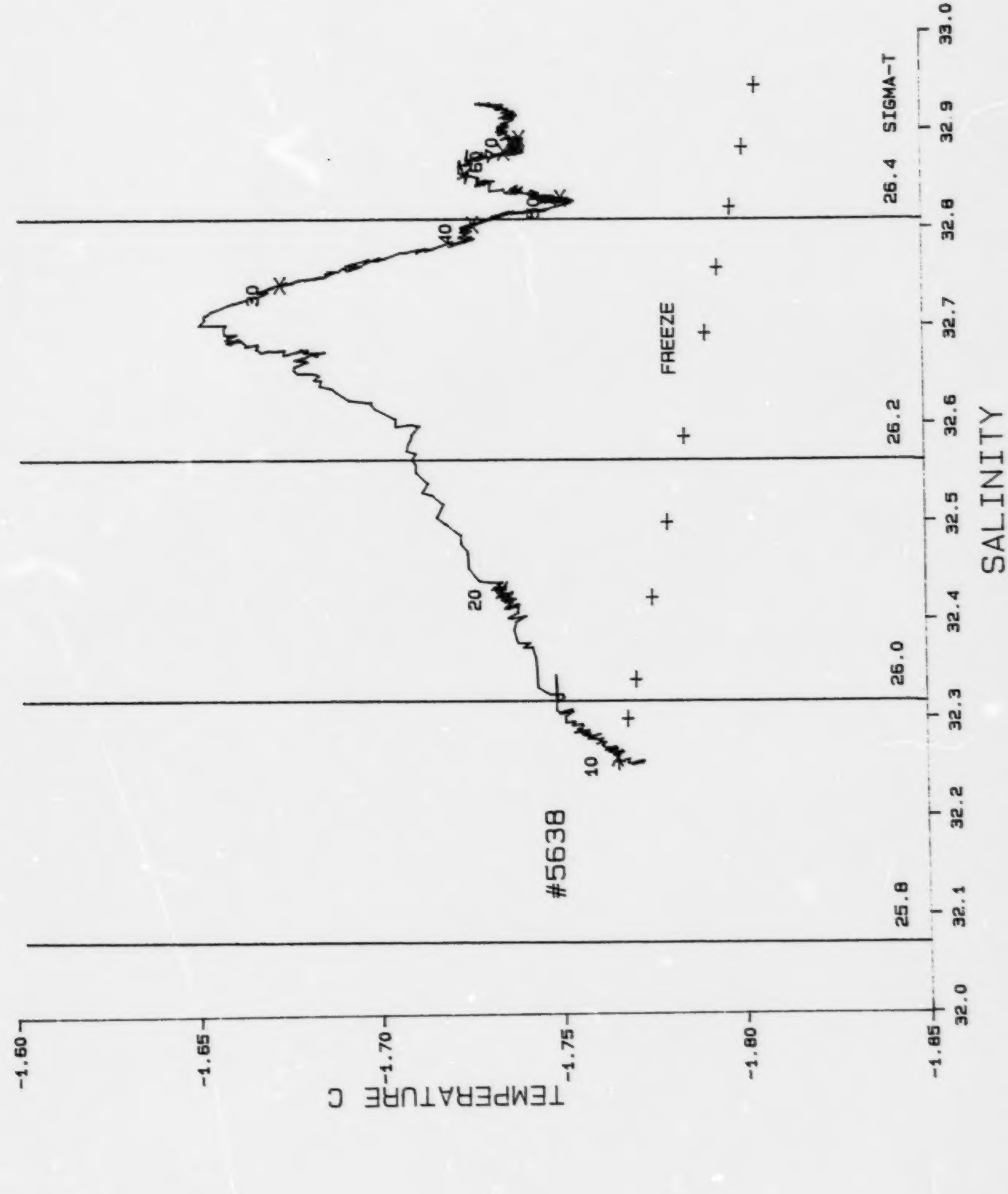


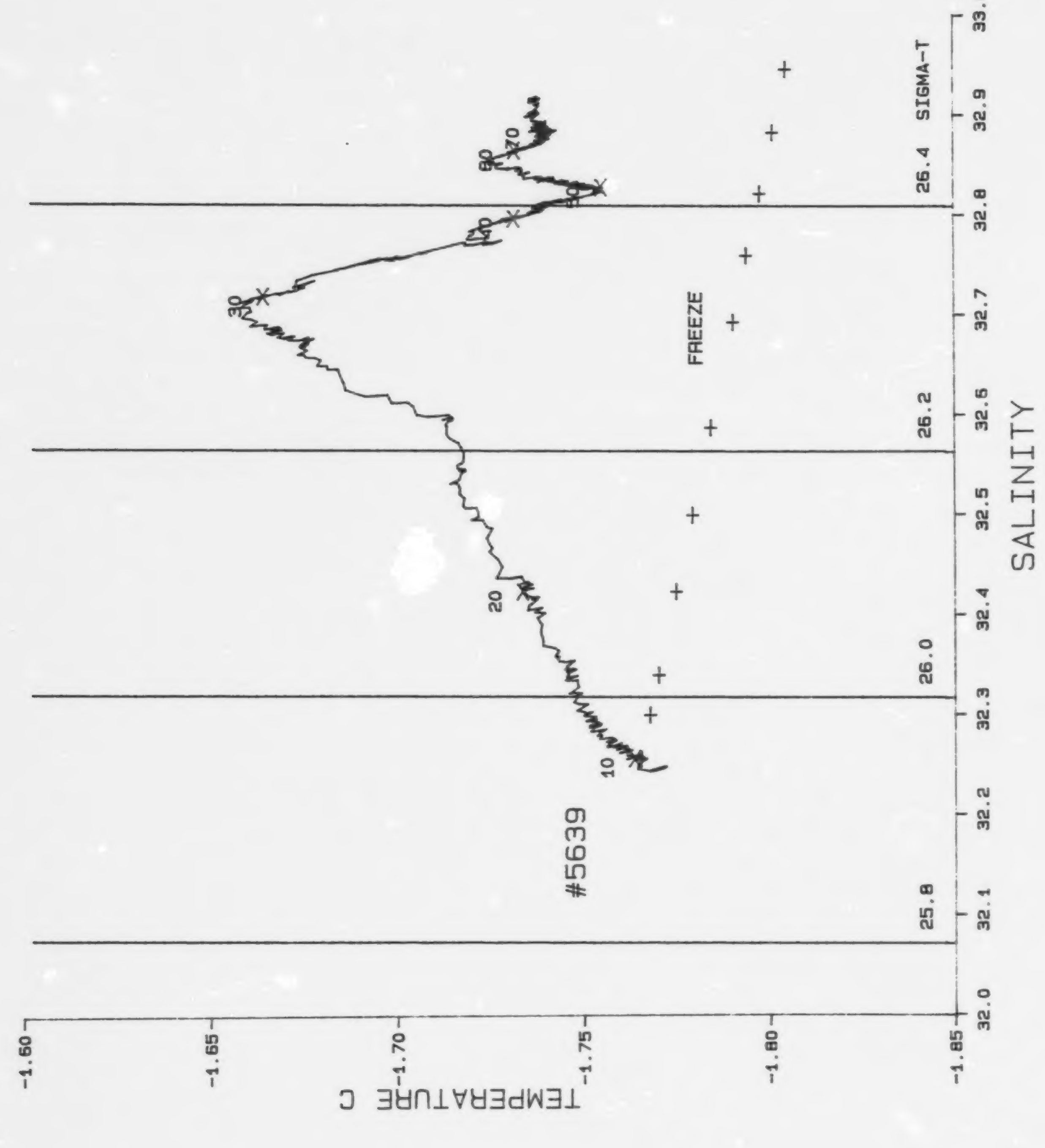
# T-S PLOT FOR EXP. No. 5637



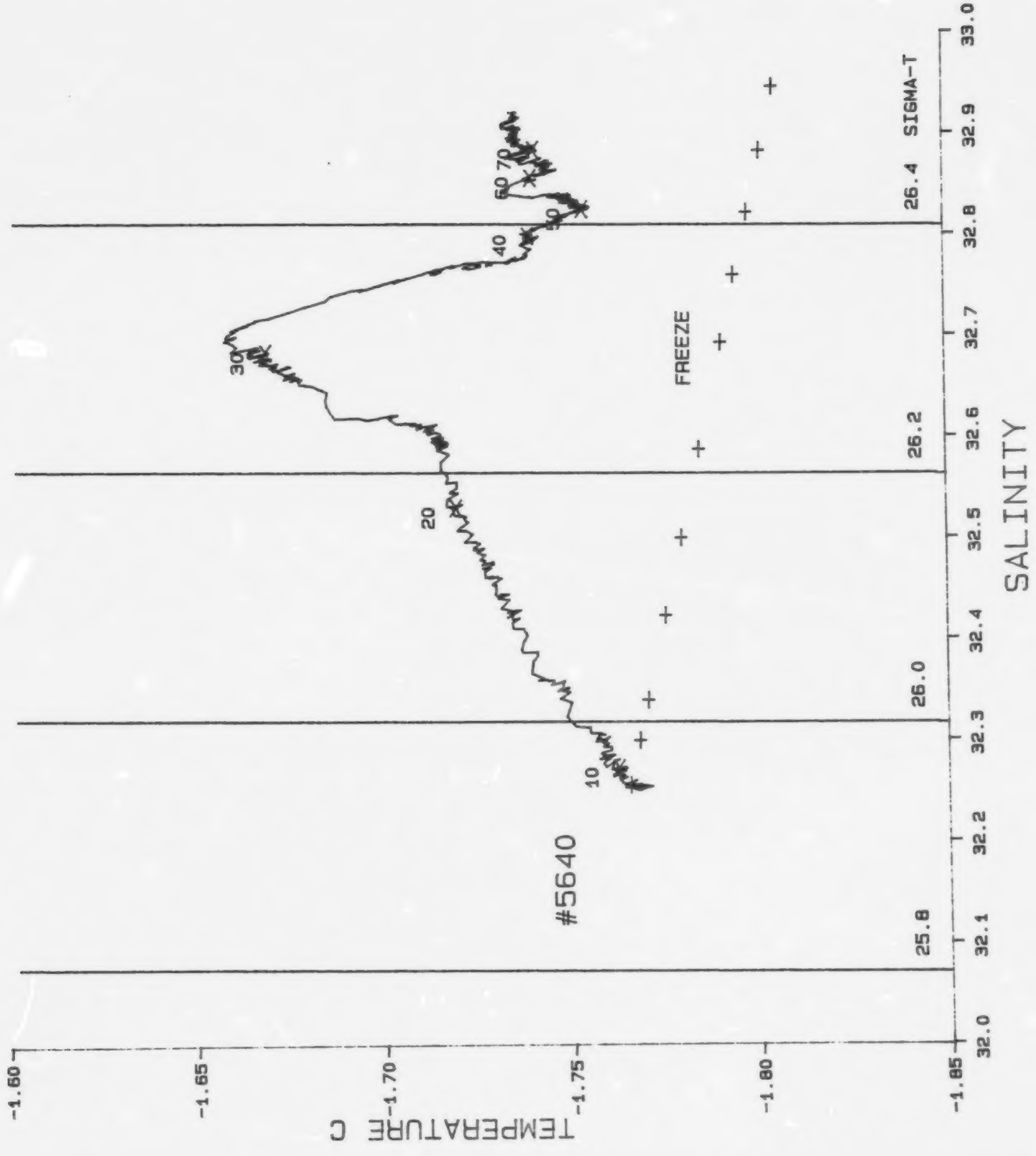
# T-S PLOT FOR EXP. No. 5638



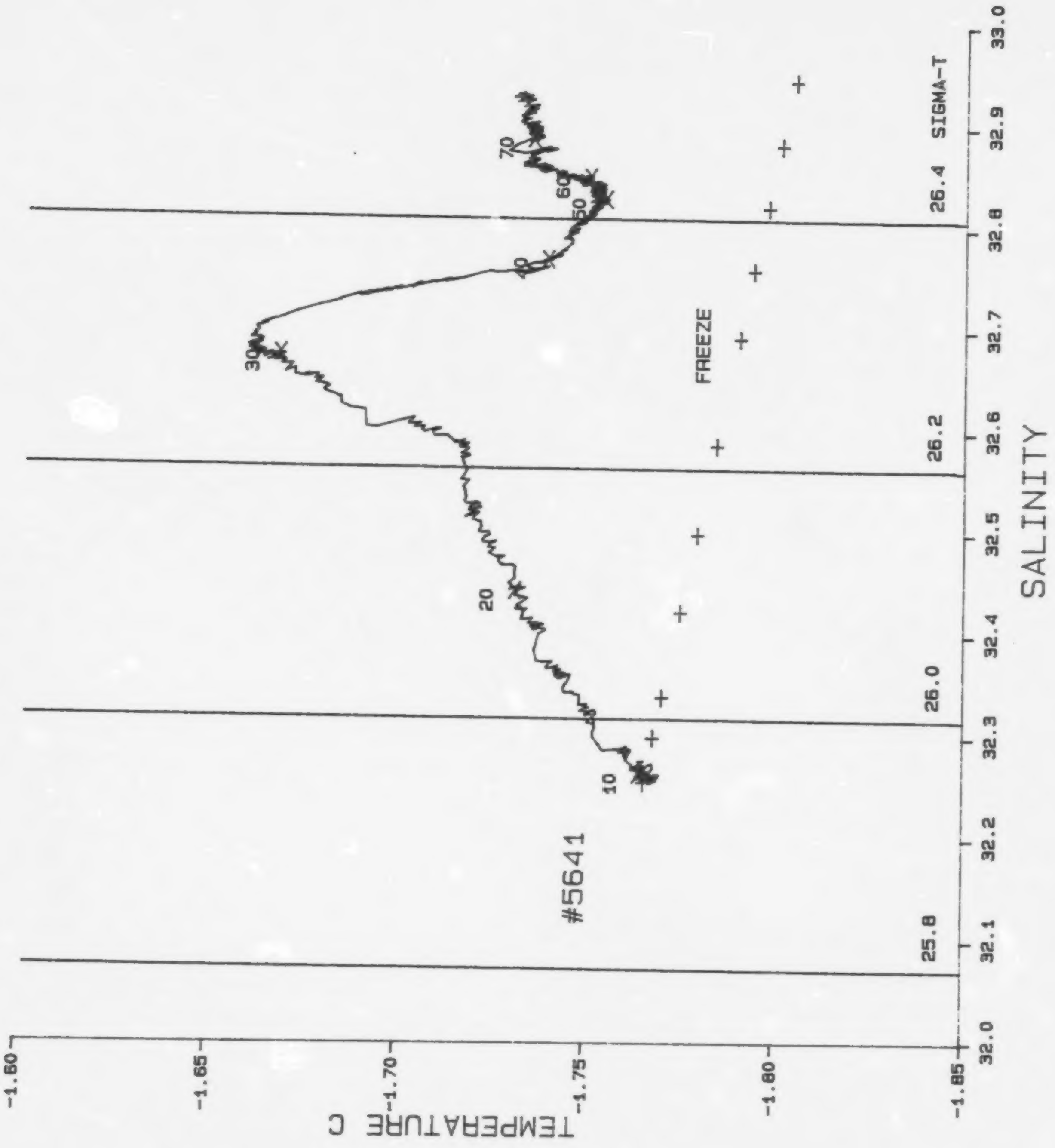
# T-S PLOT FOR EXP. No. 5639



# T-S PLOT FOR EXP. No. 5640



# T-S PLOT FOR EXP. No. 5641



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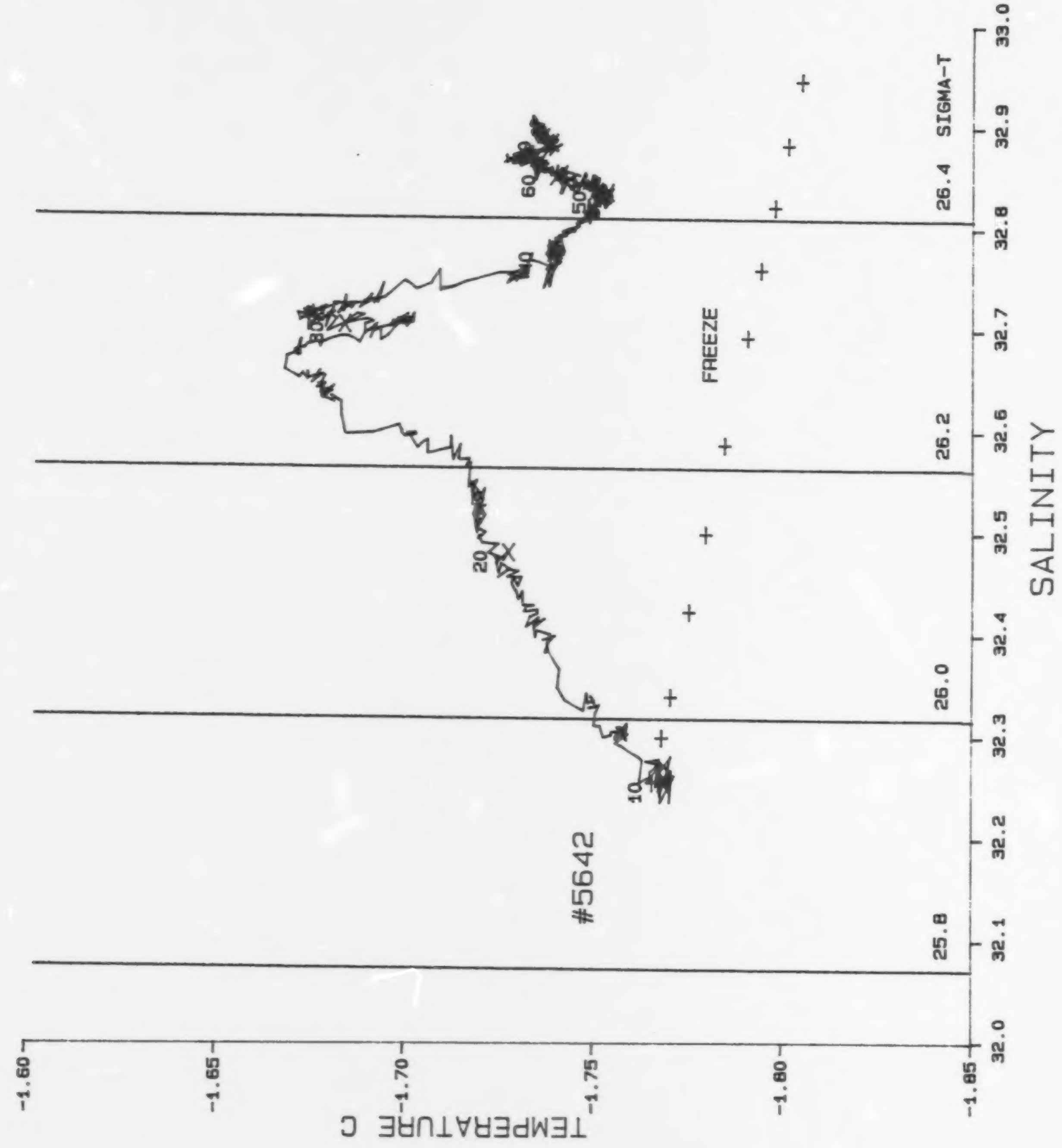
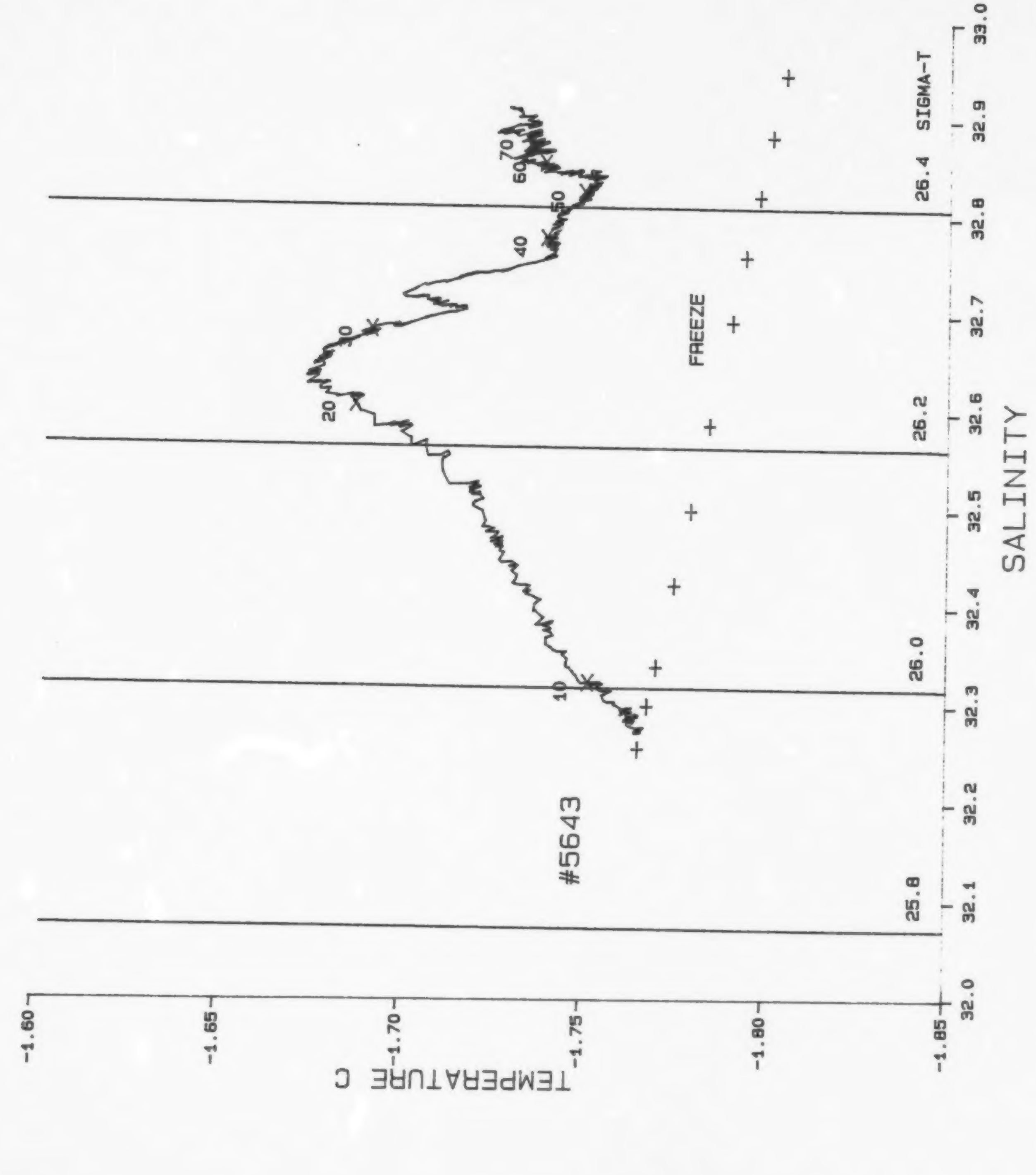


# T-S PLOT FOR EXP. No. 5643



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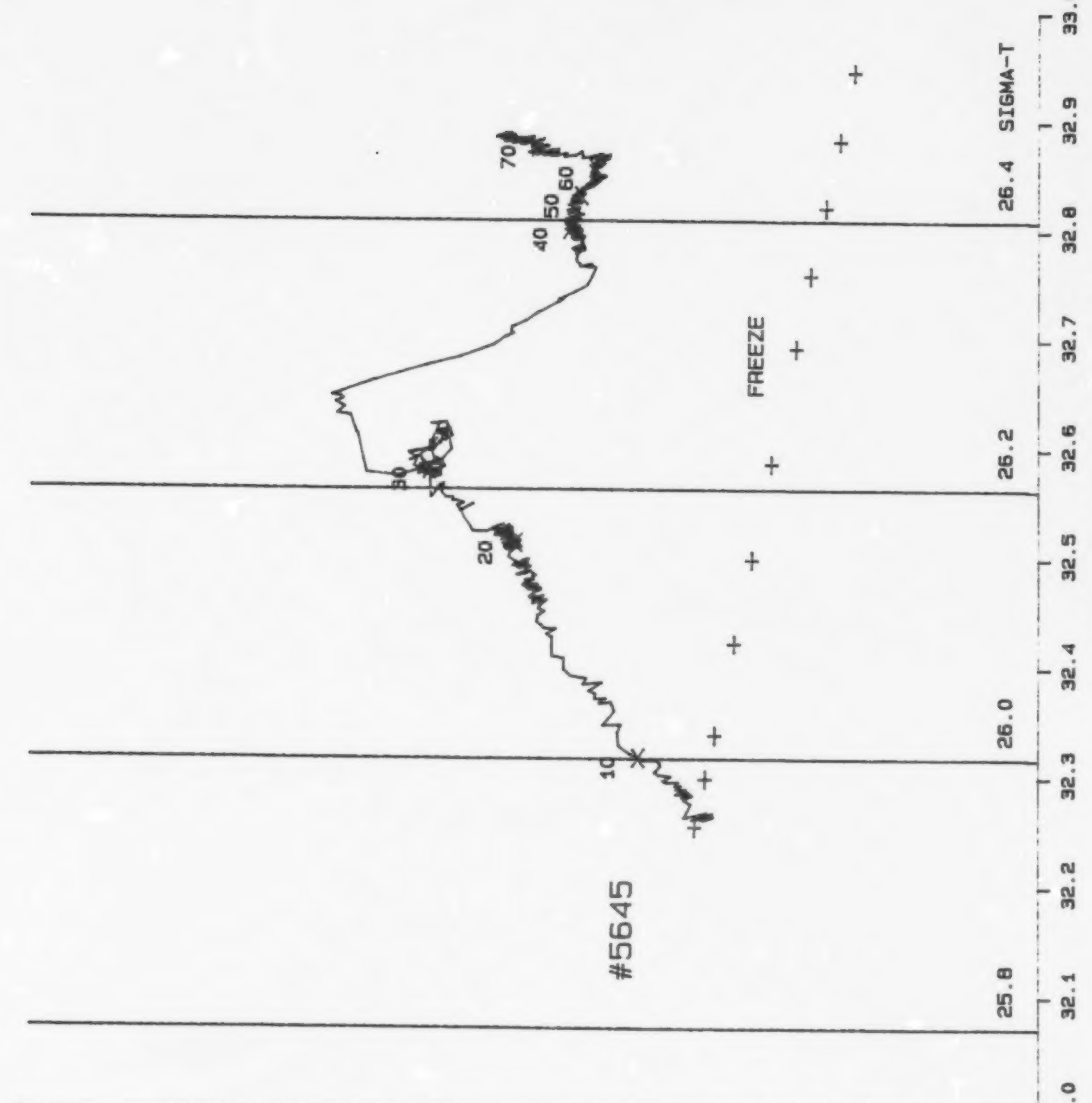
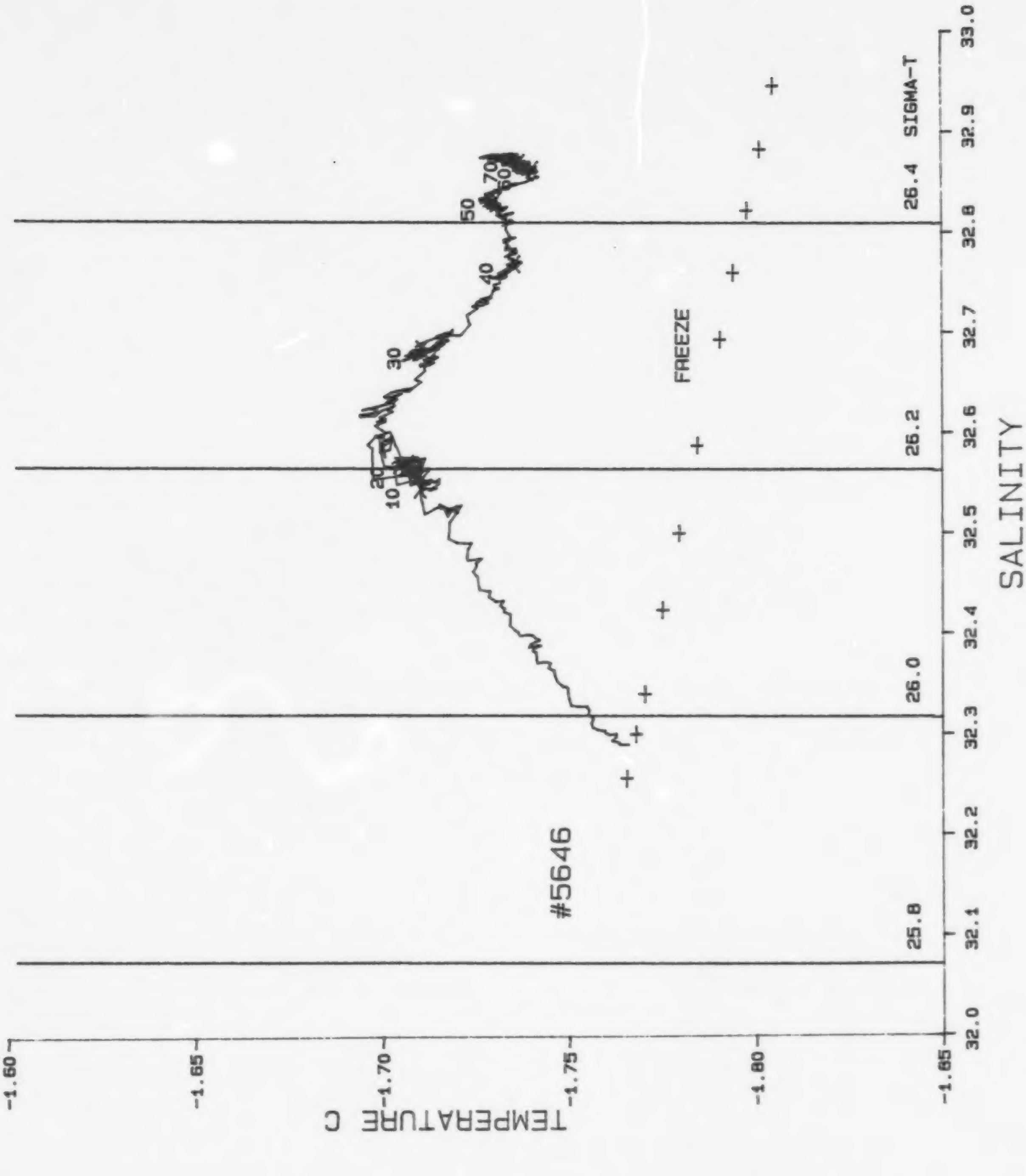


# T-S PLOT FOR EXP. No. 5646



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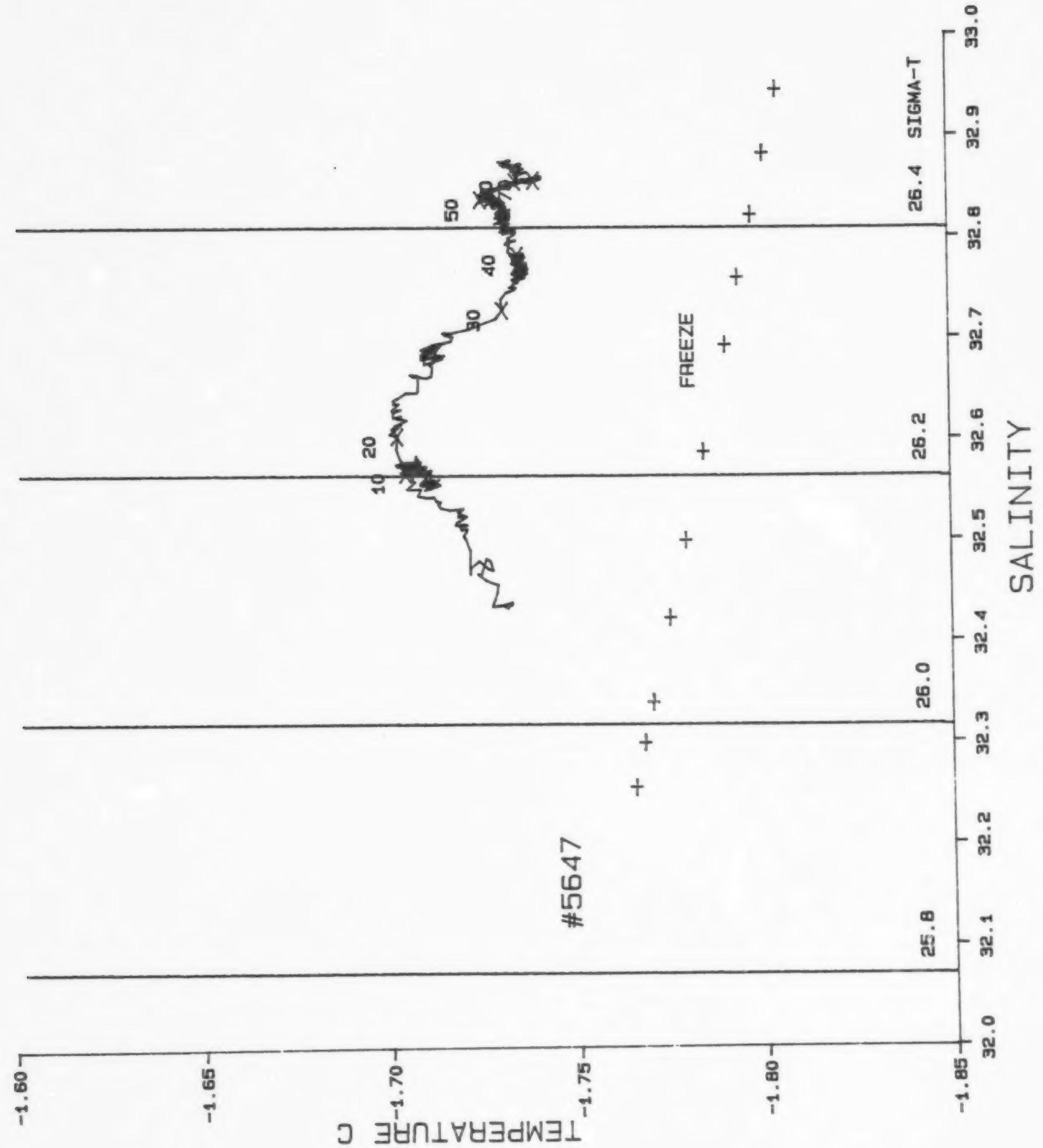

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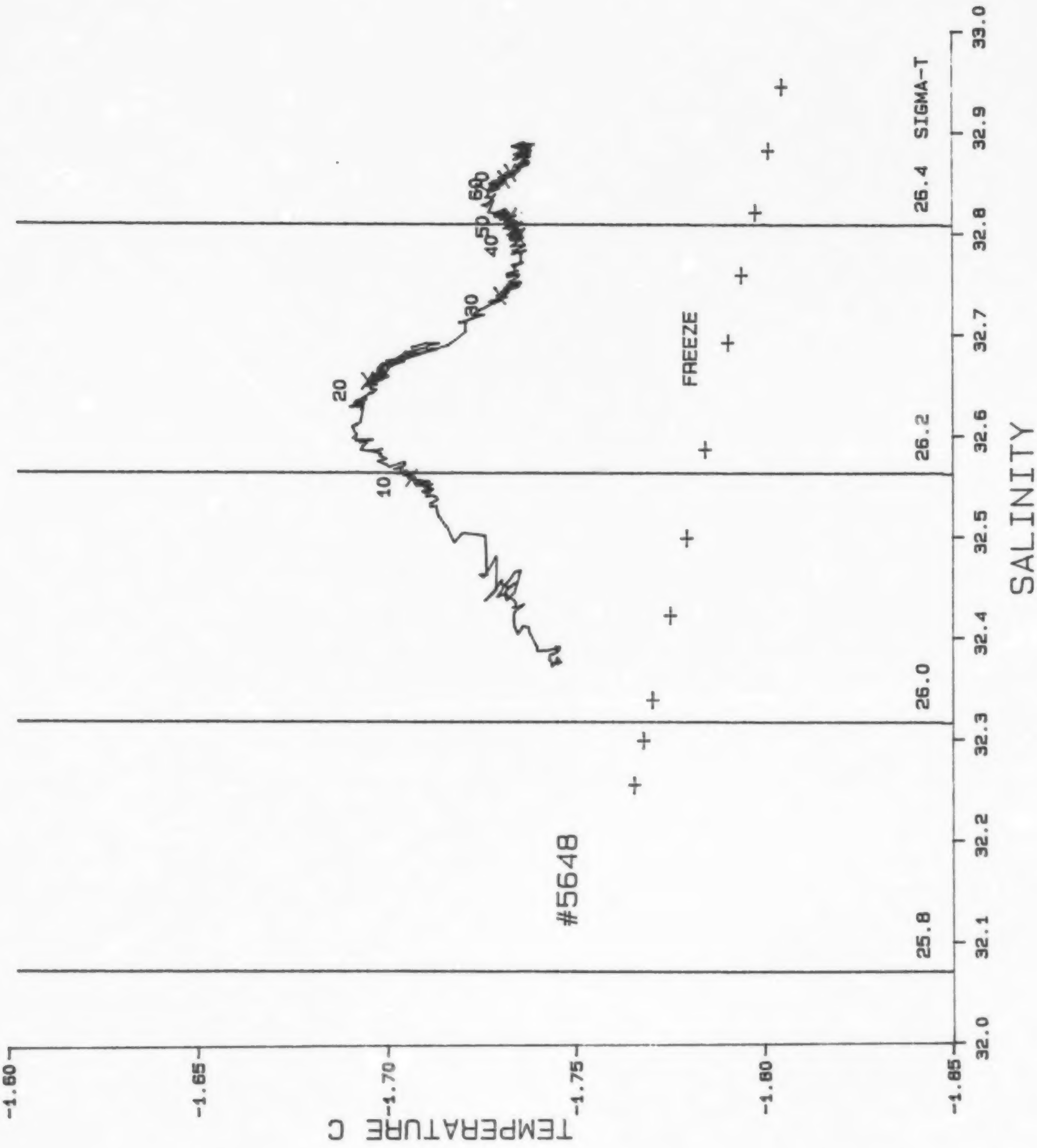

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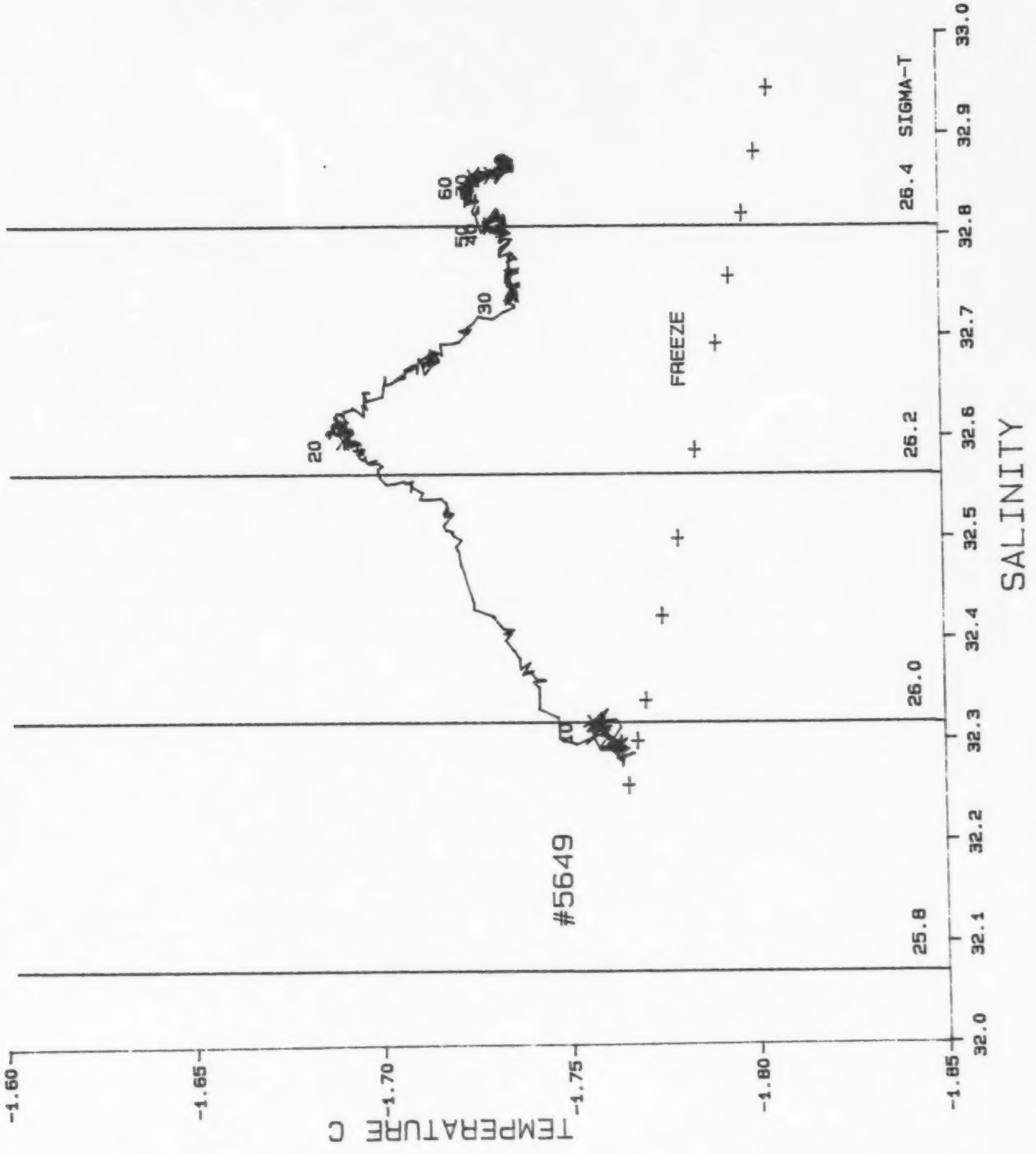

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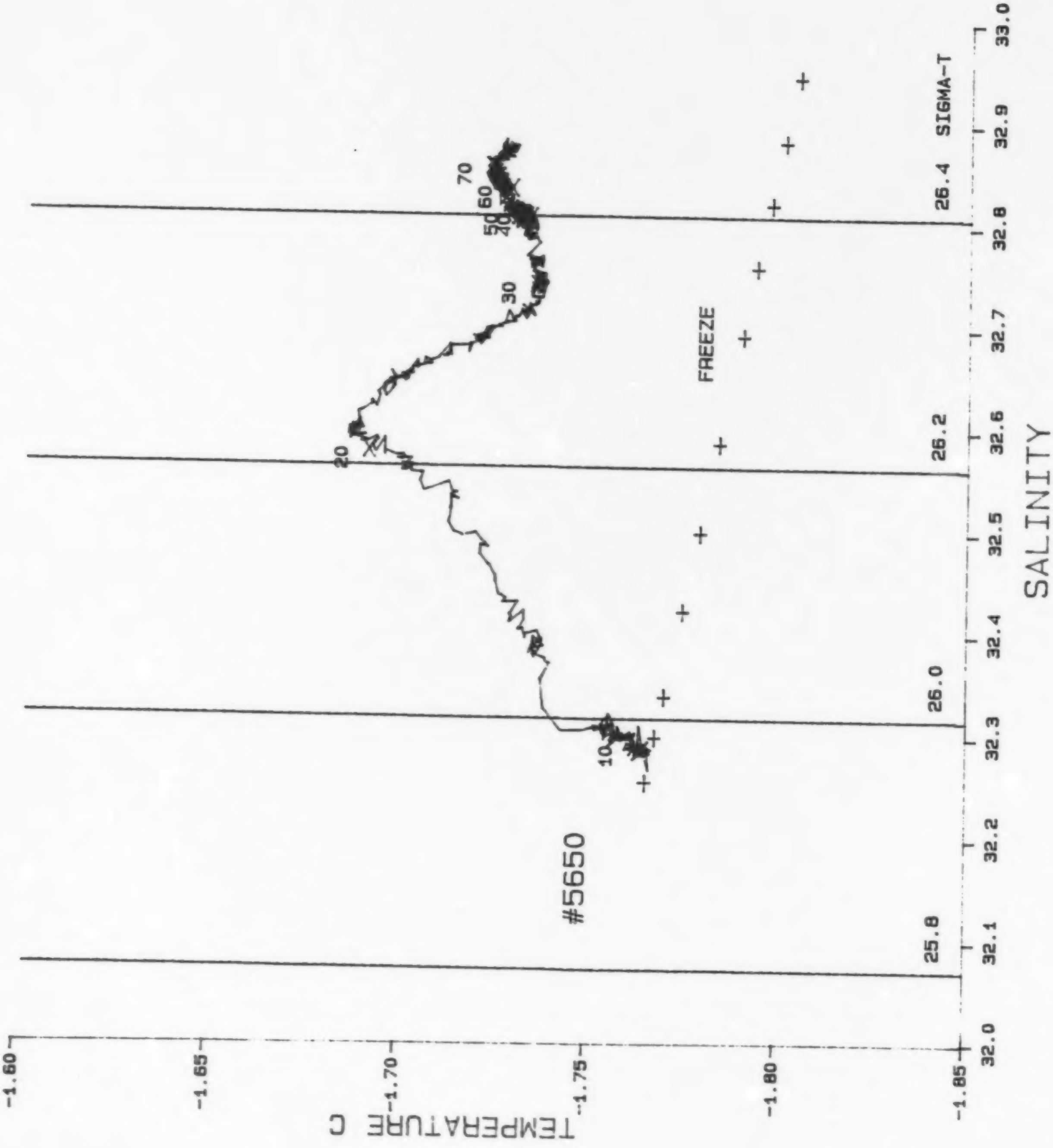

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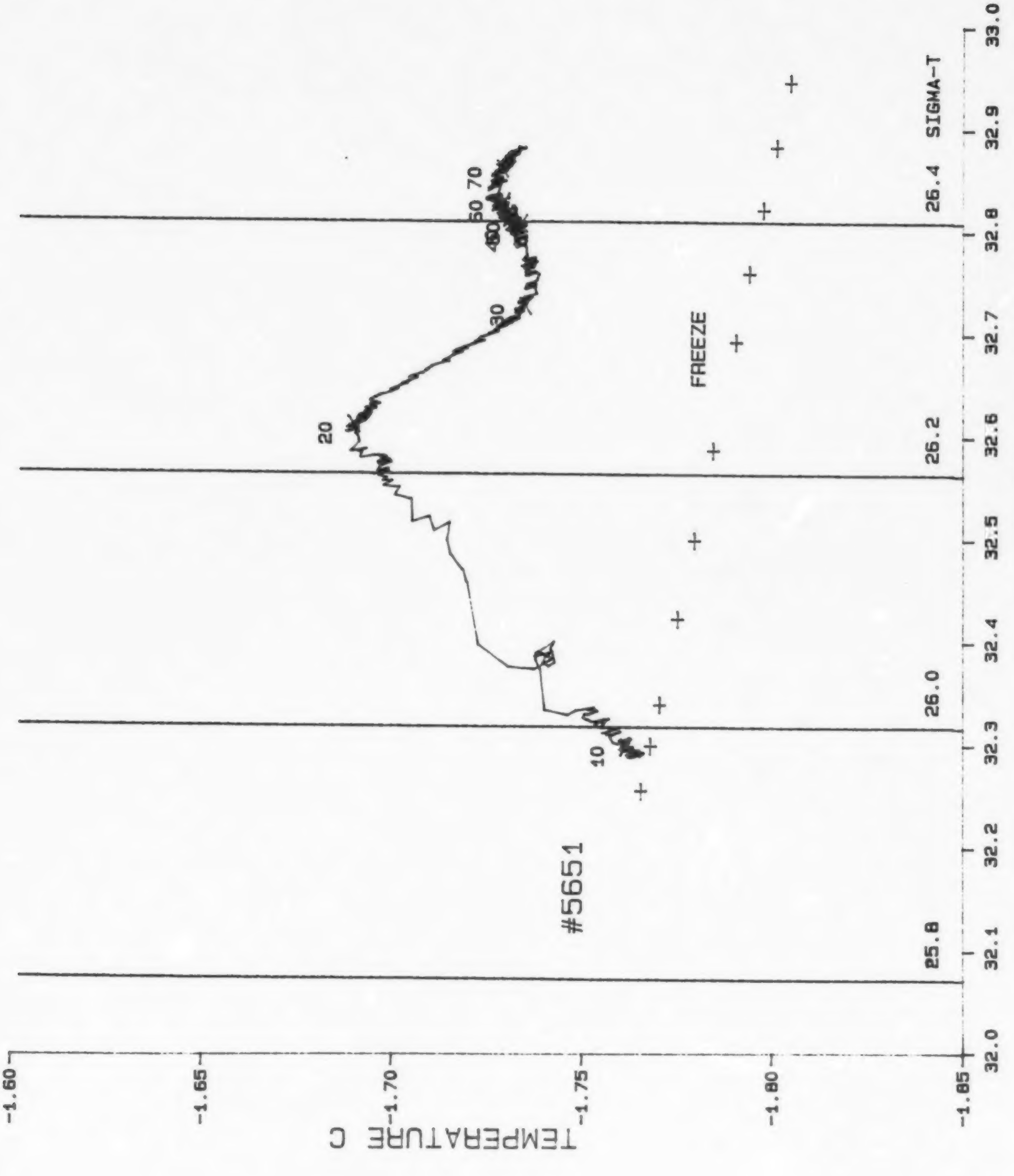

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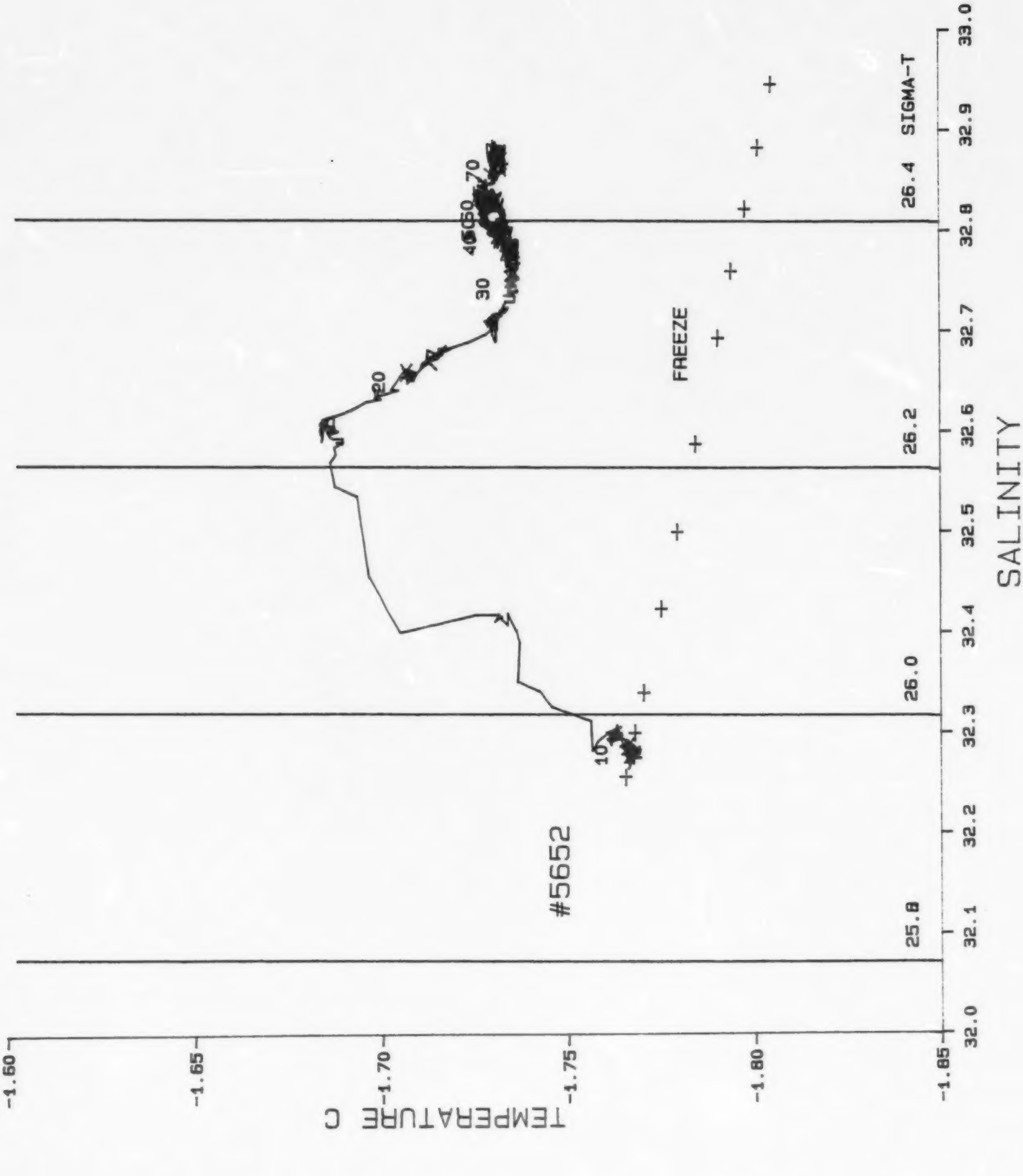

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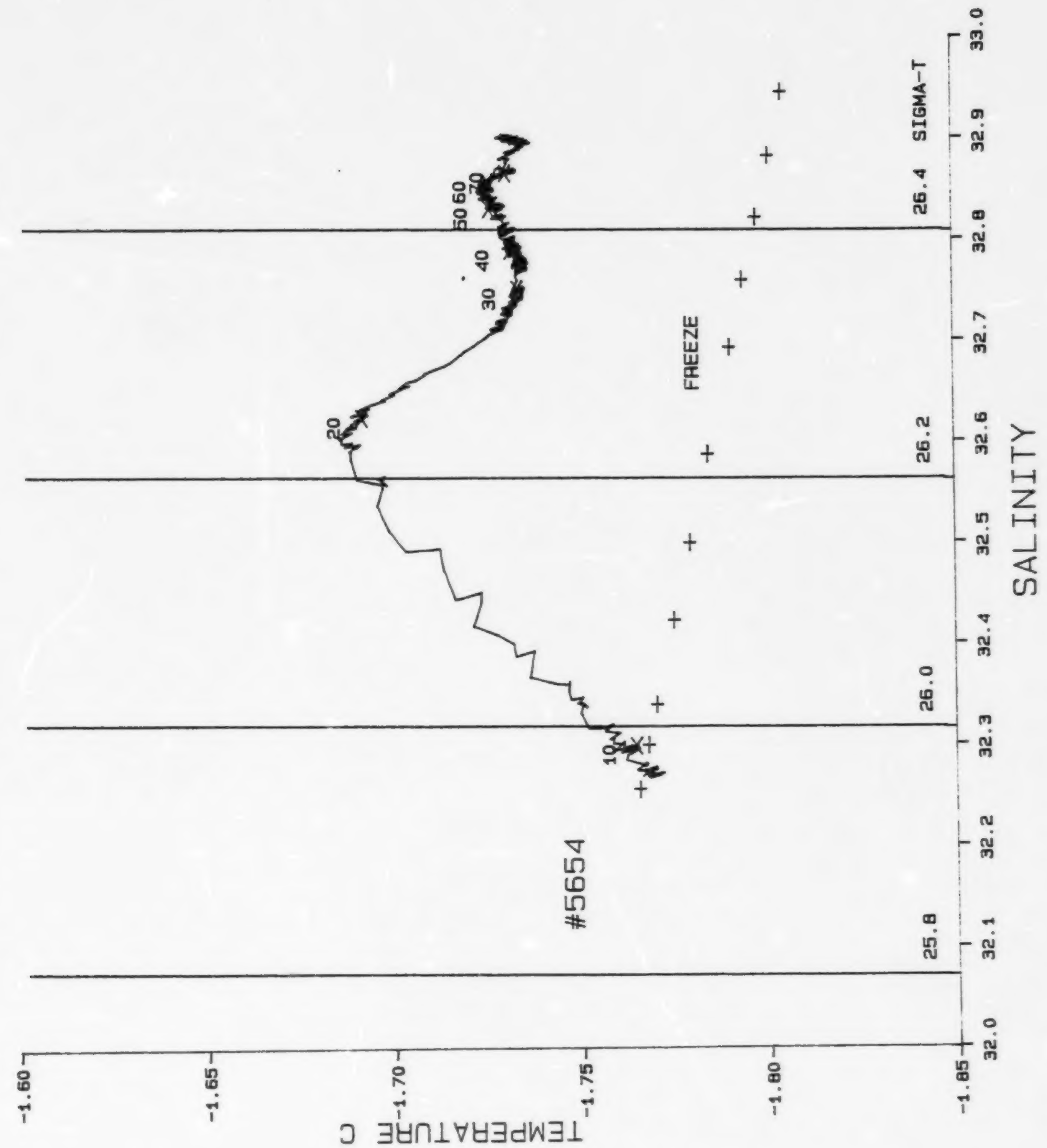

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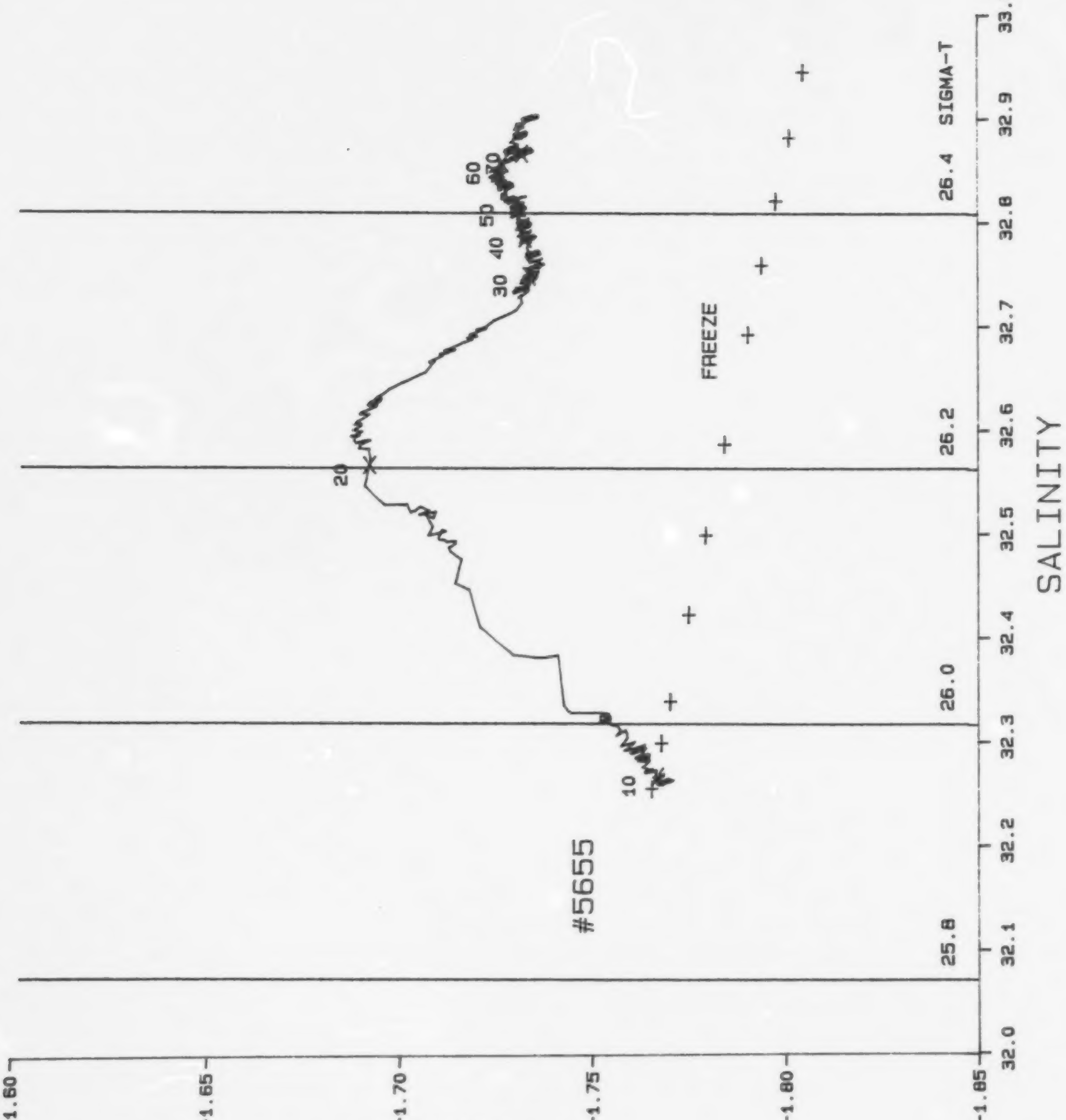

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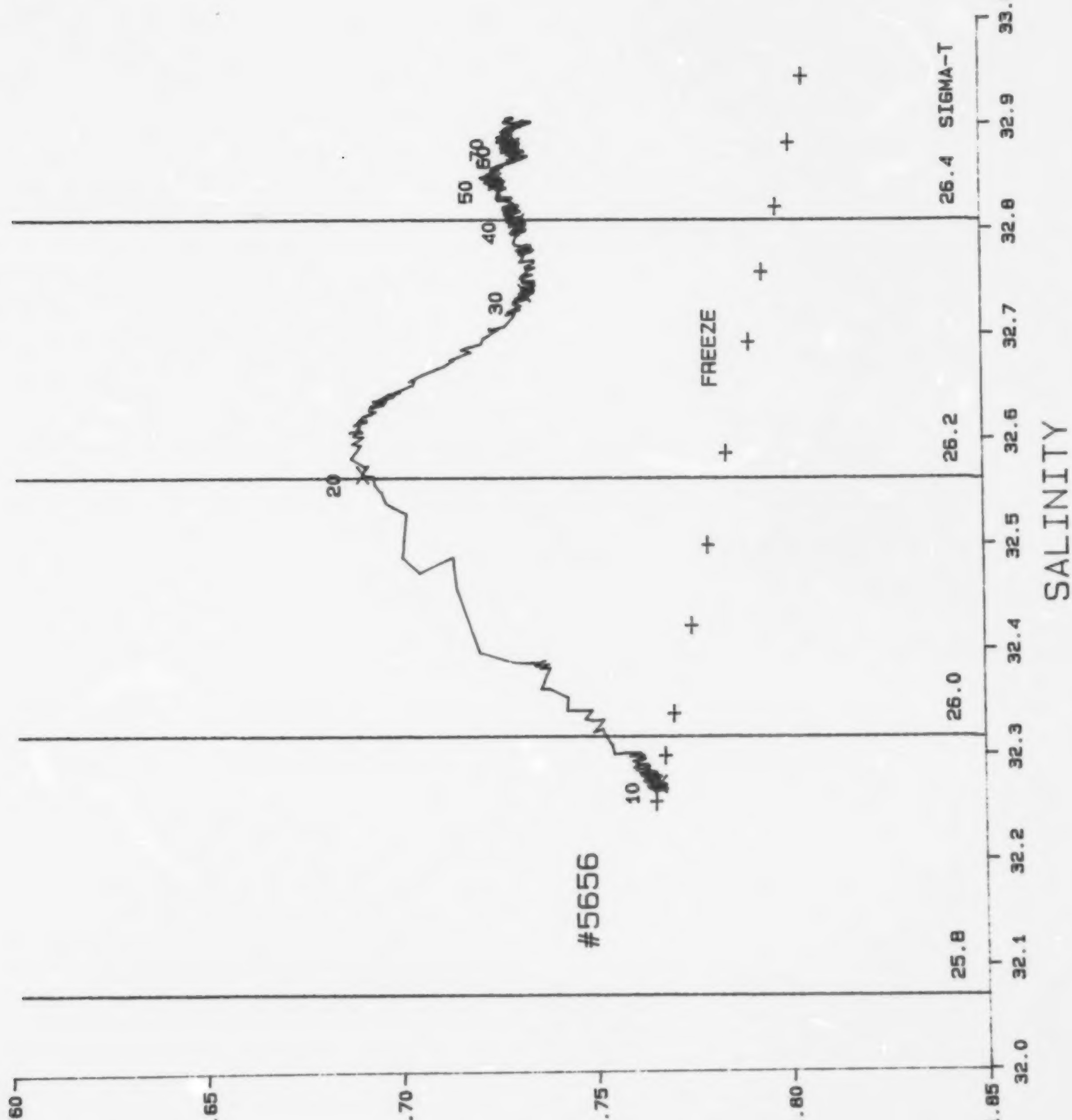

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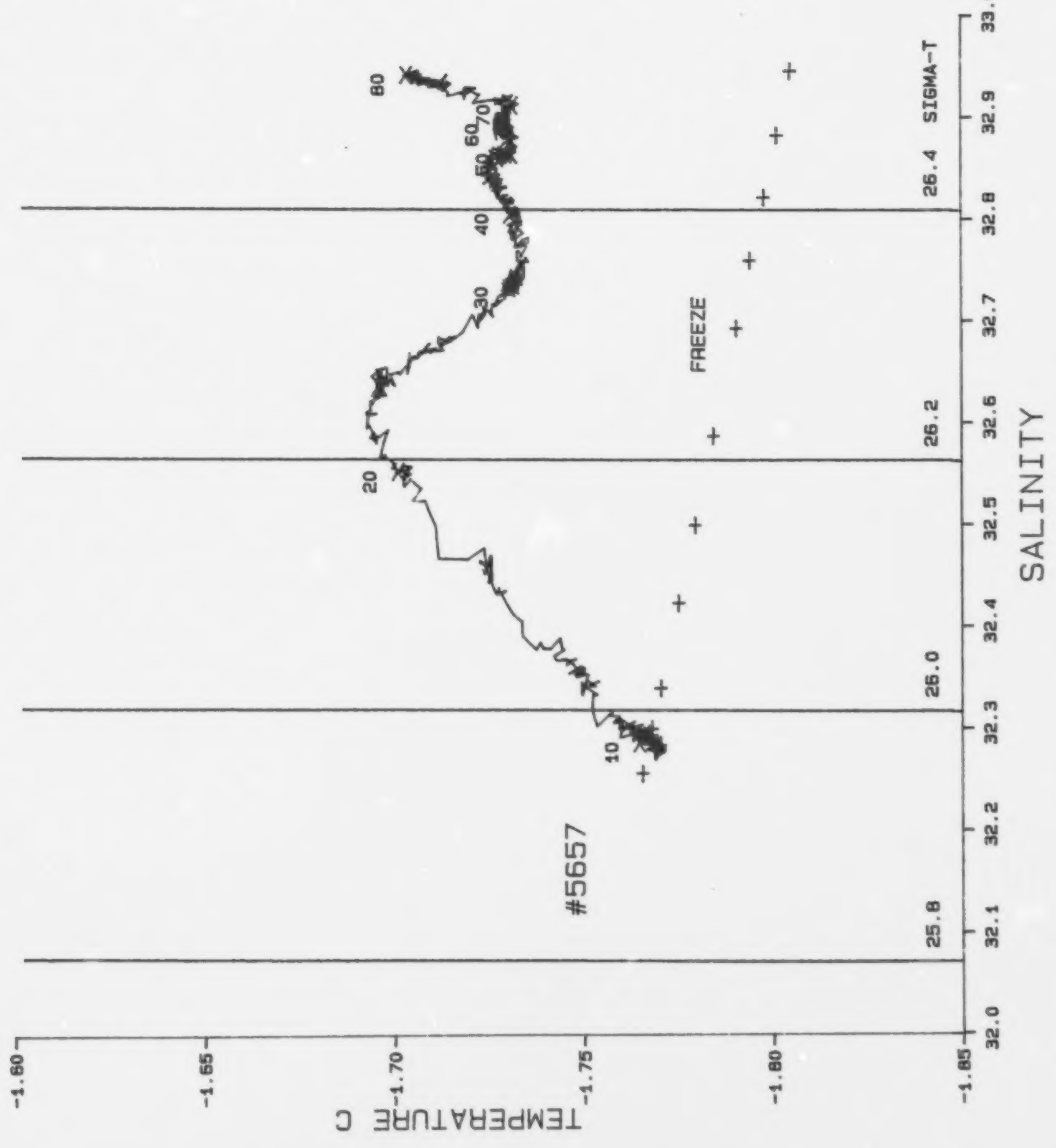

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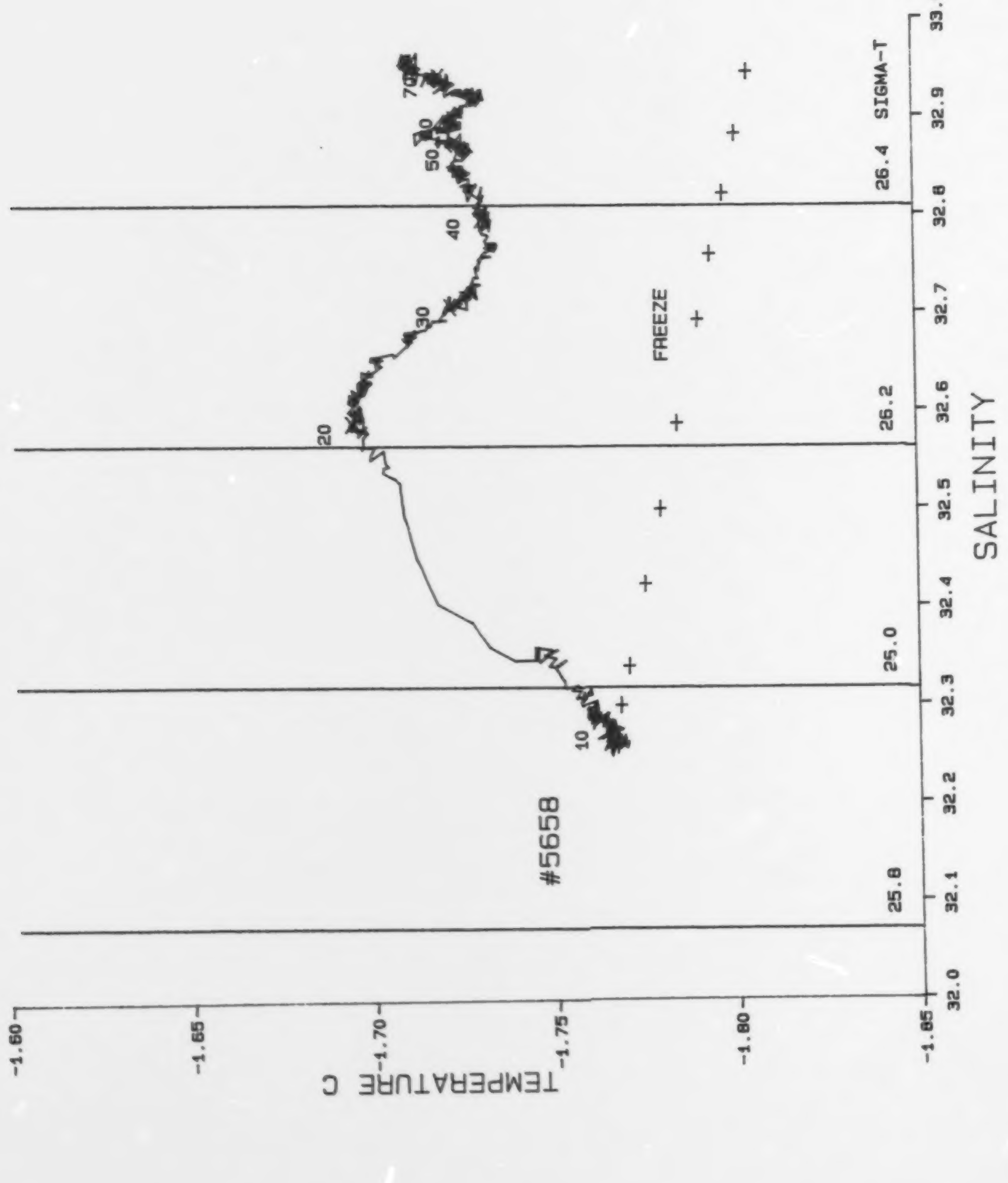

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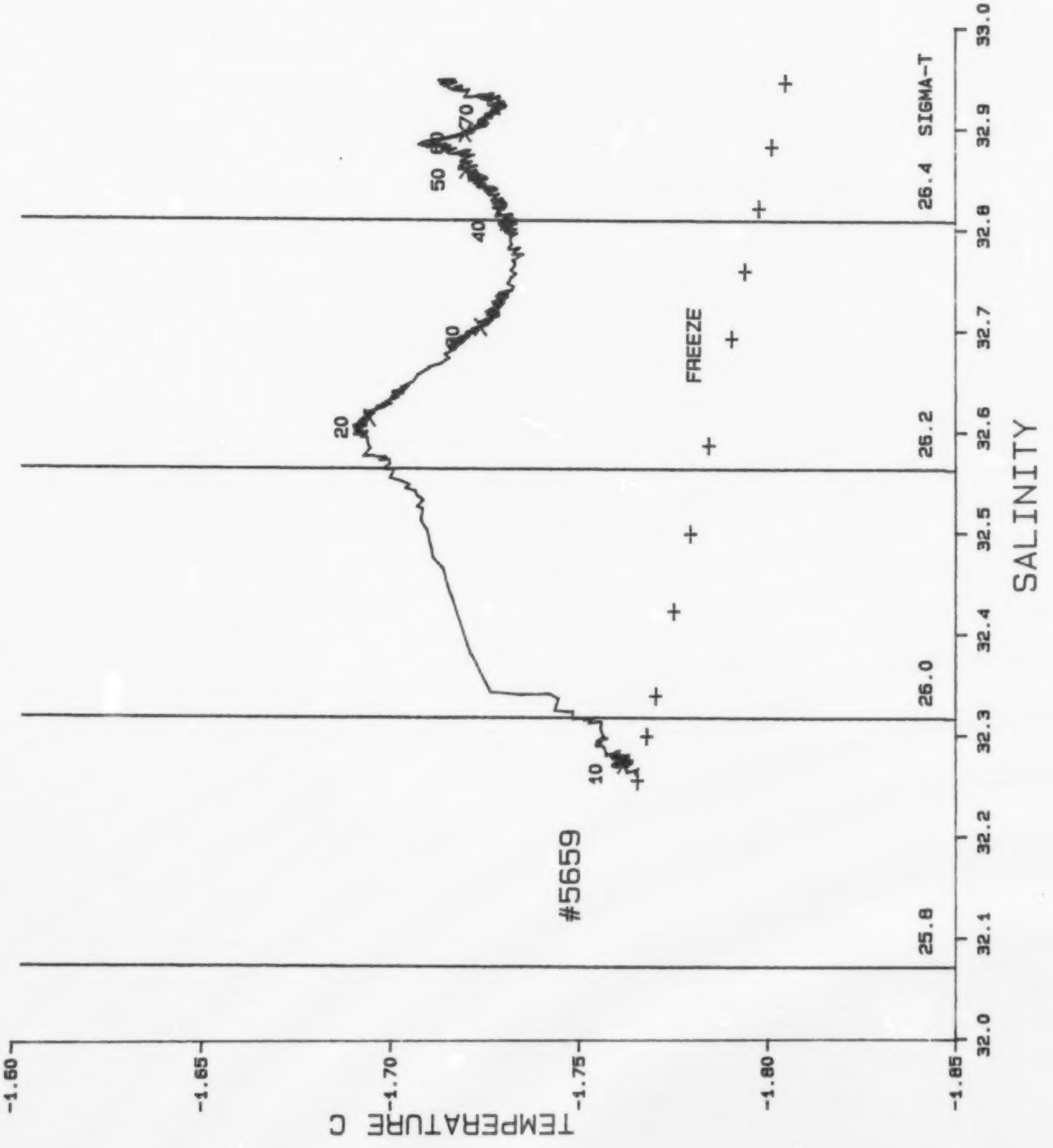
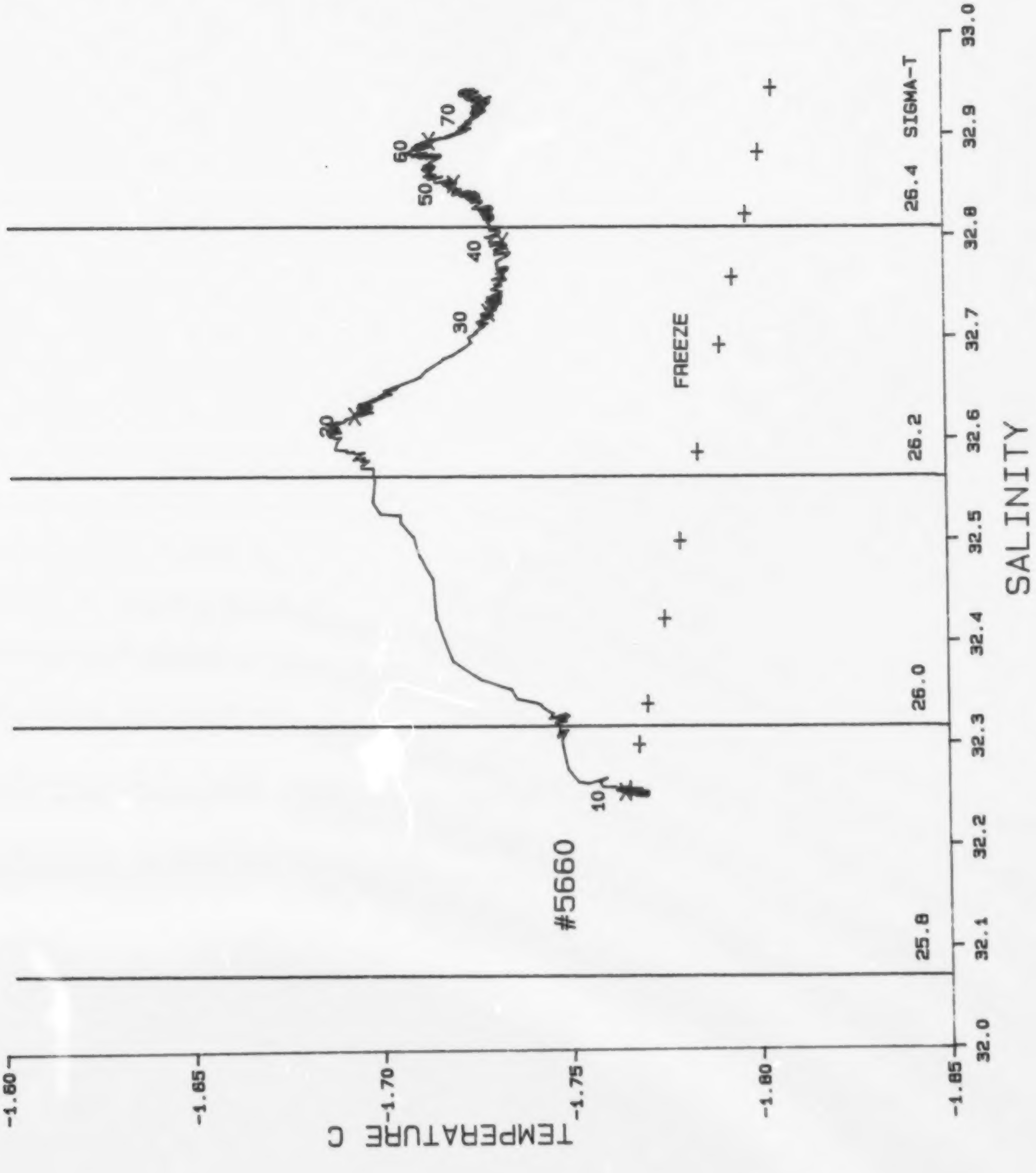
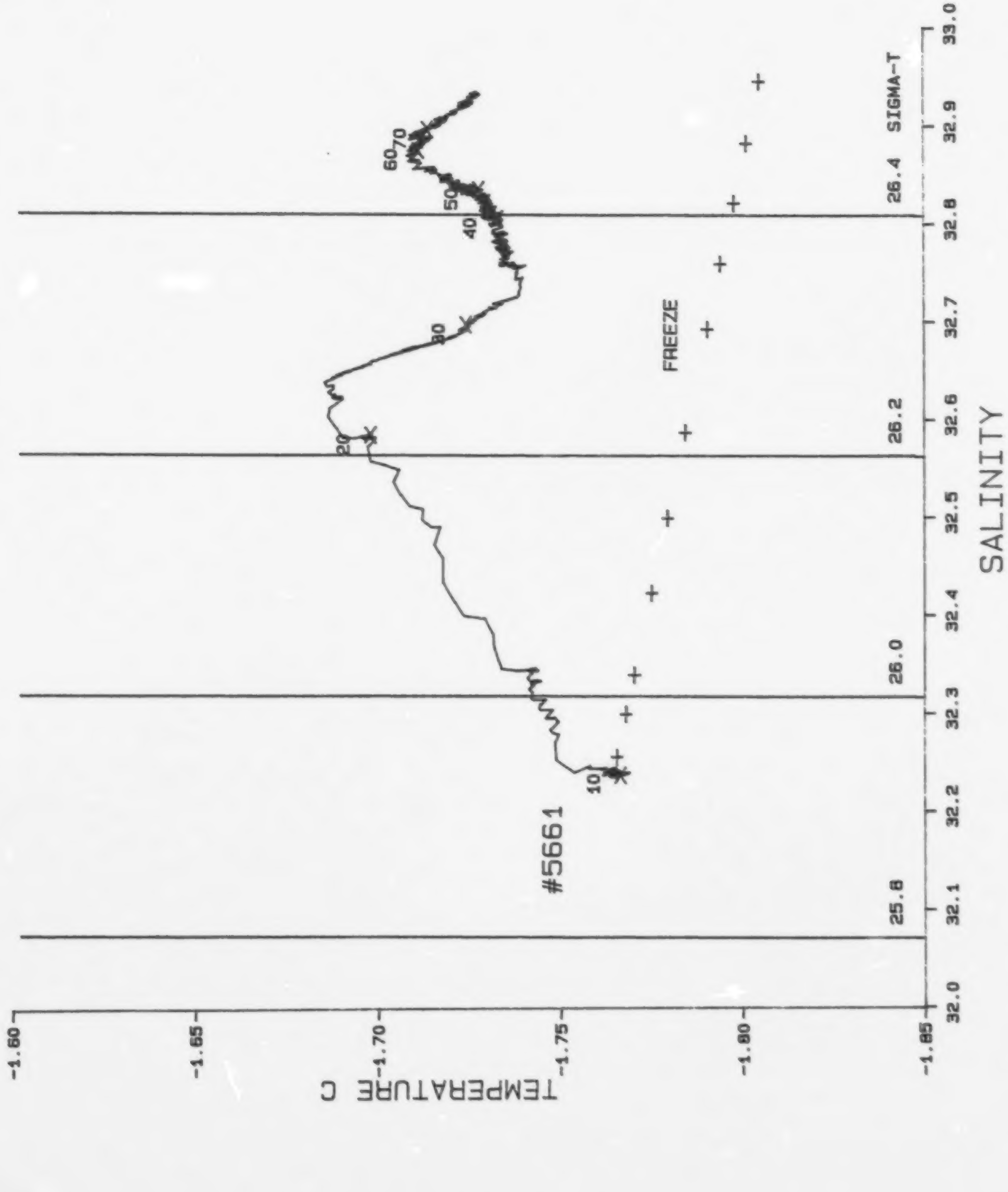


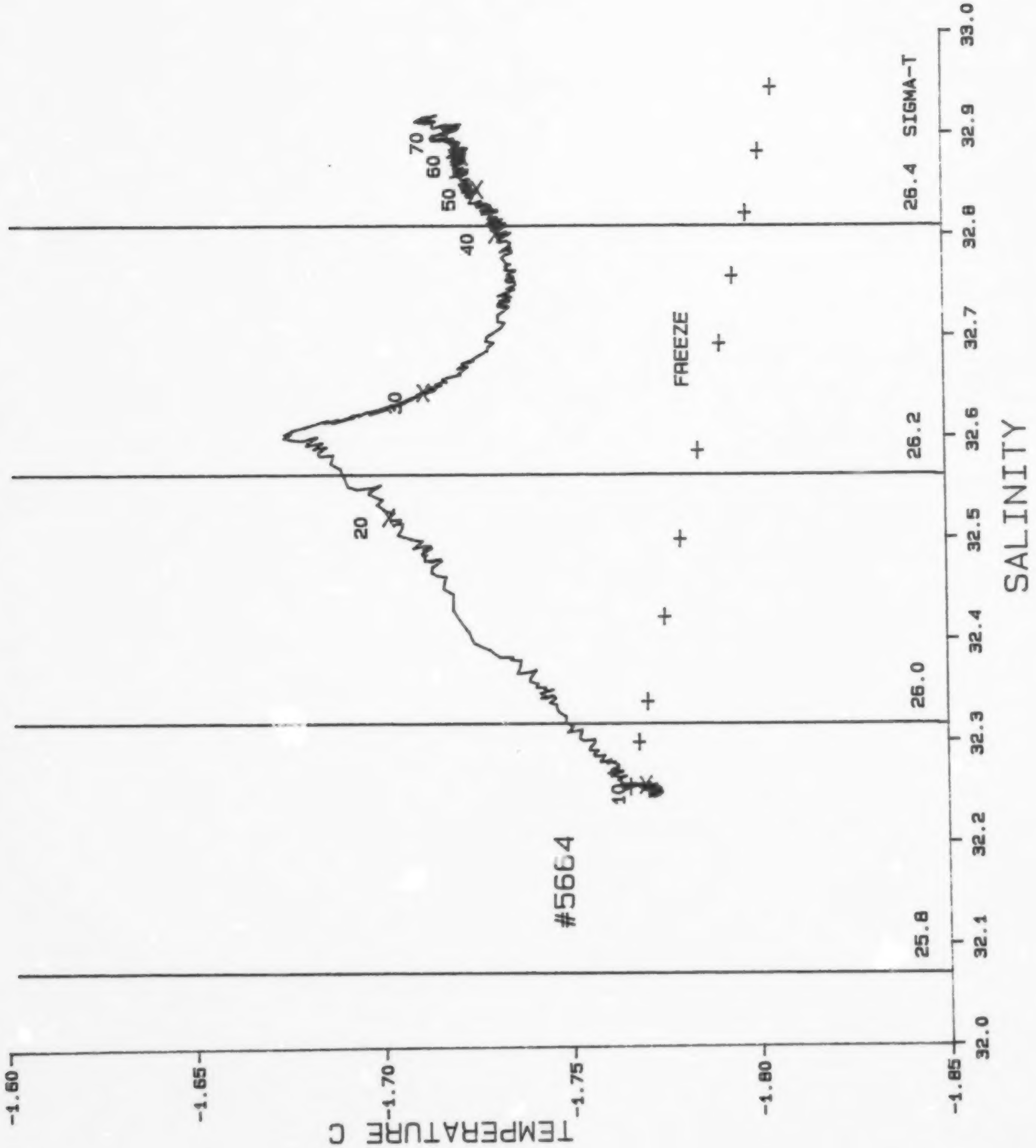
# T-S PLOT FOR EXP. No. 5660



# T-S PLOT FOR EXP. No. 5661



# T-S PLOT FOR EXP. No. 5664



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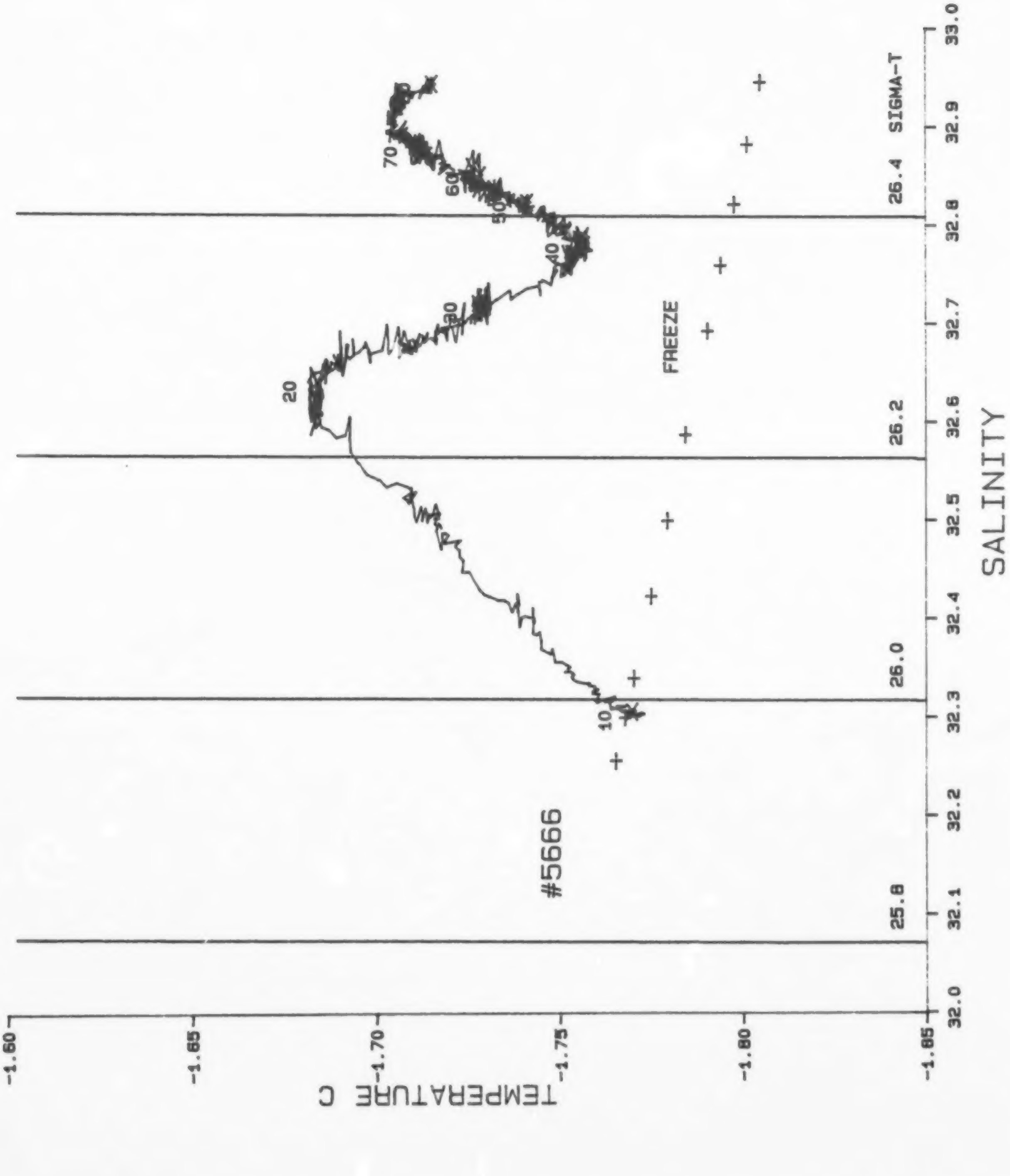

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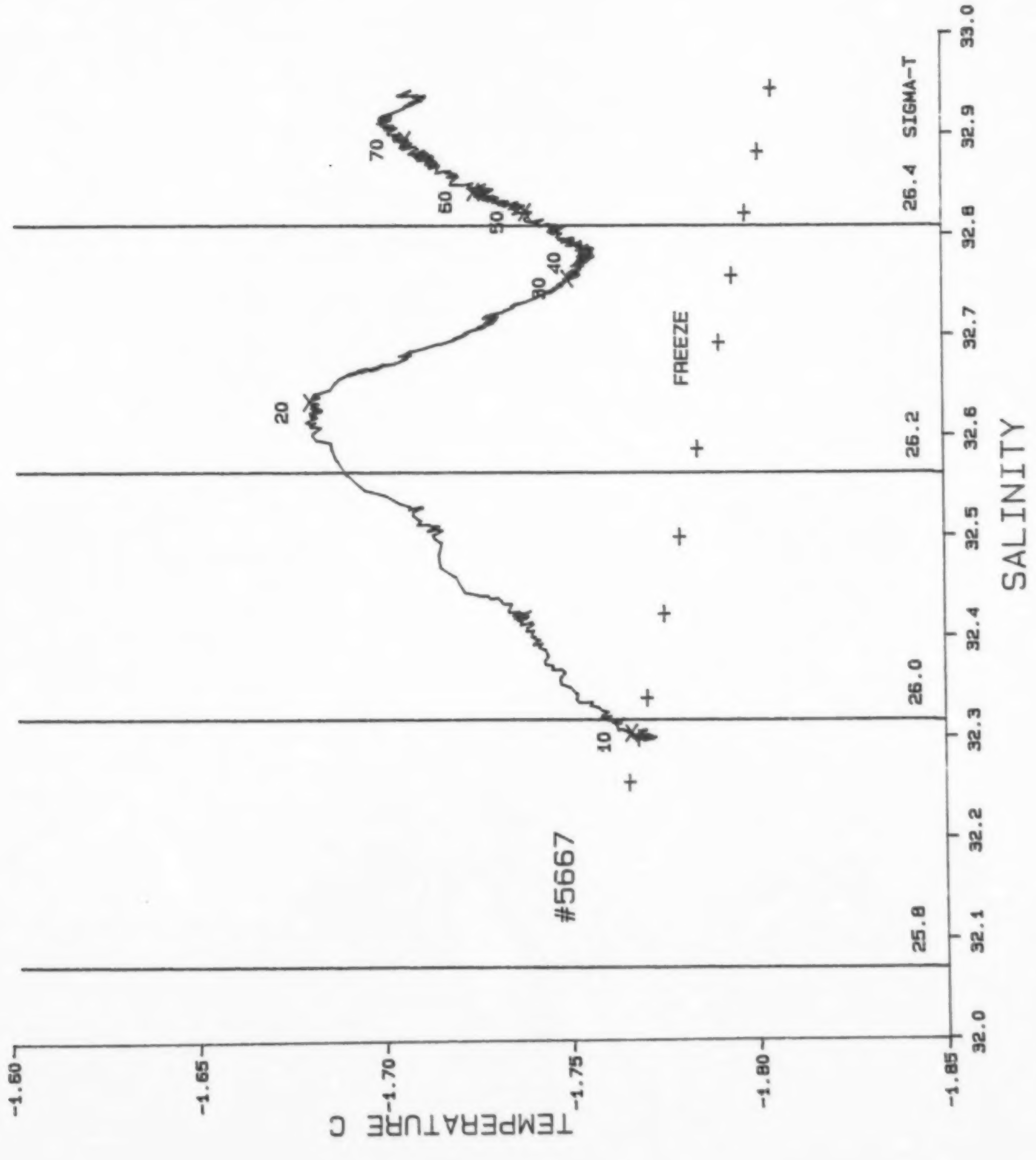

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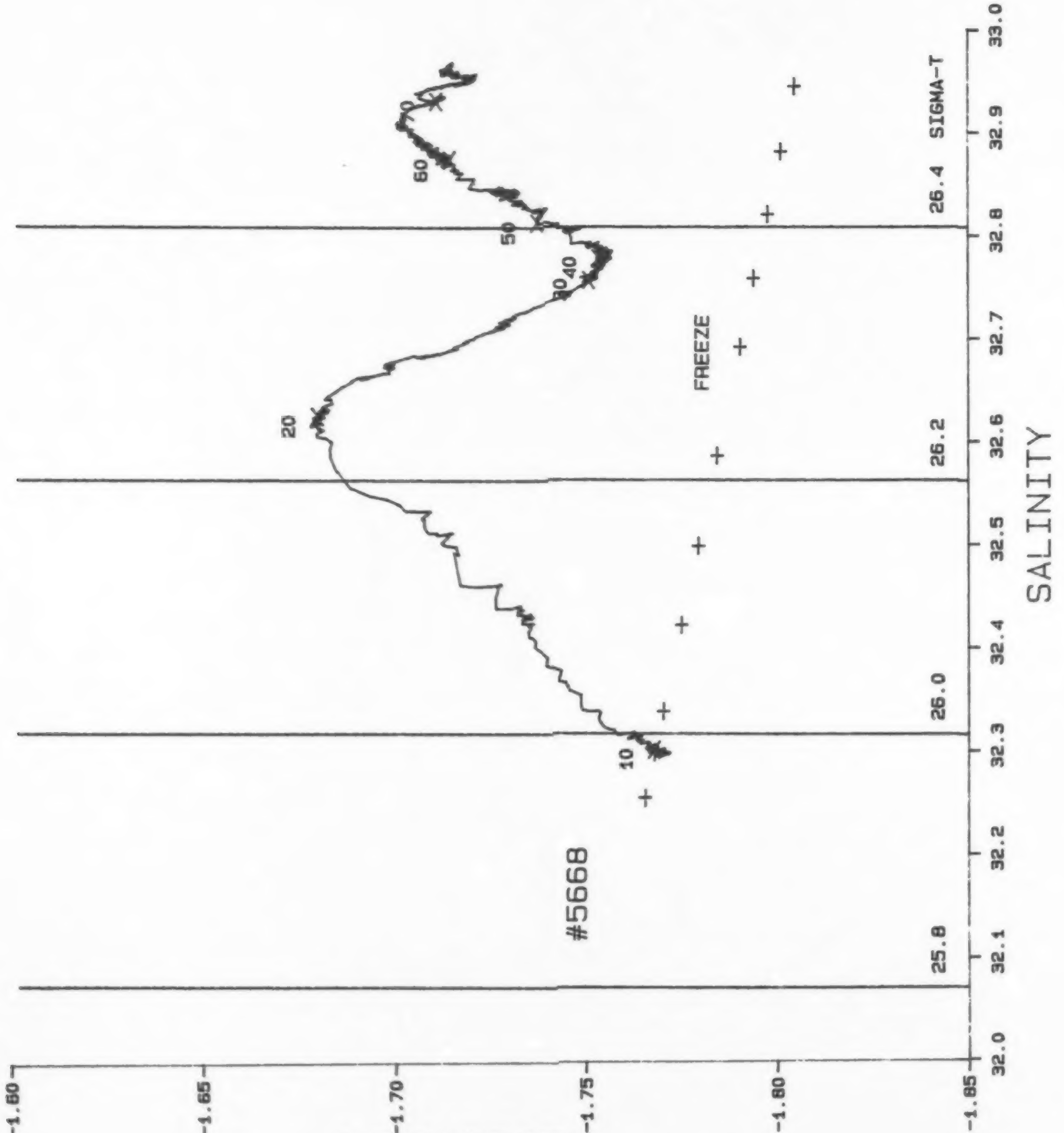

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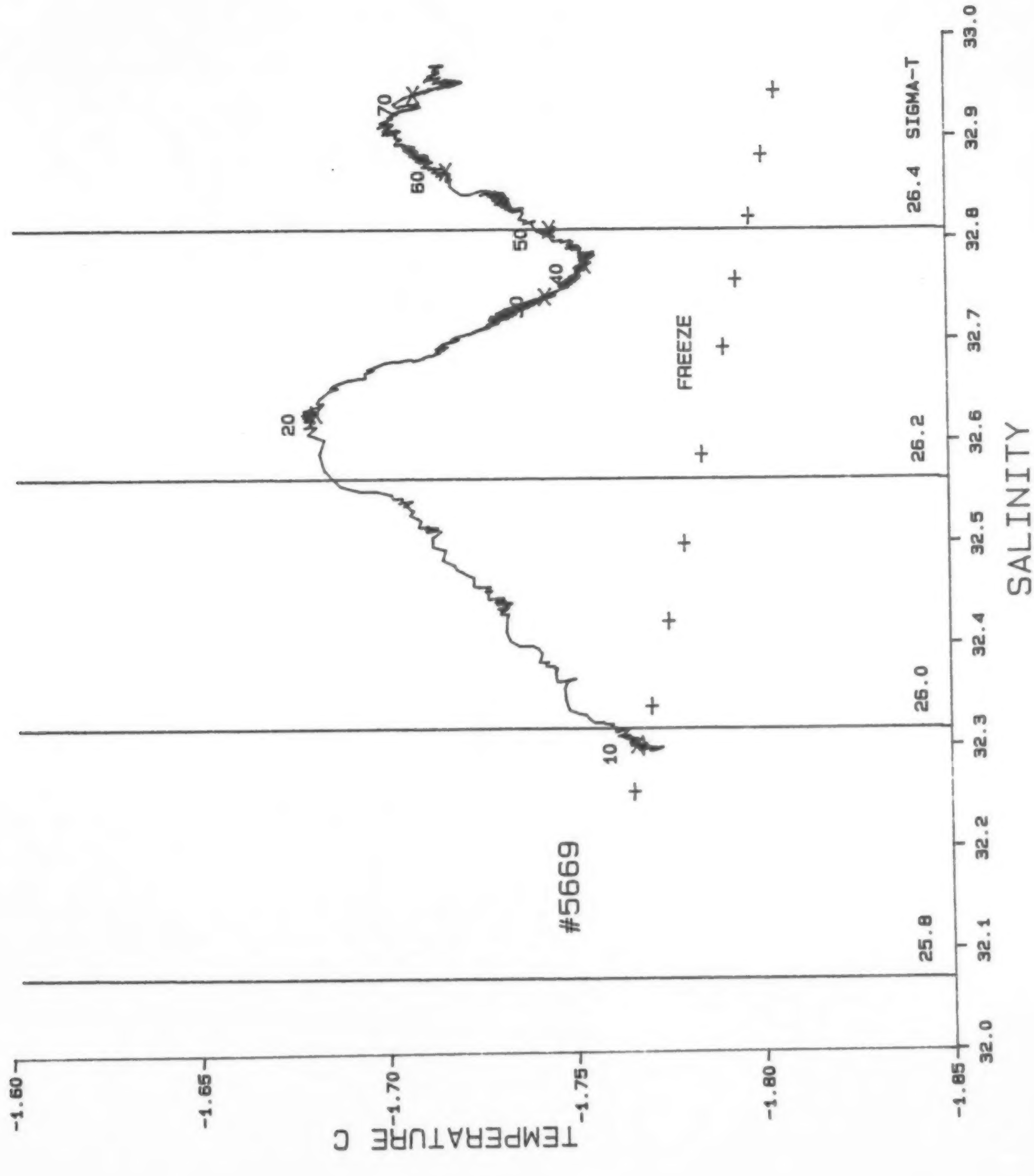
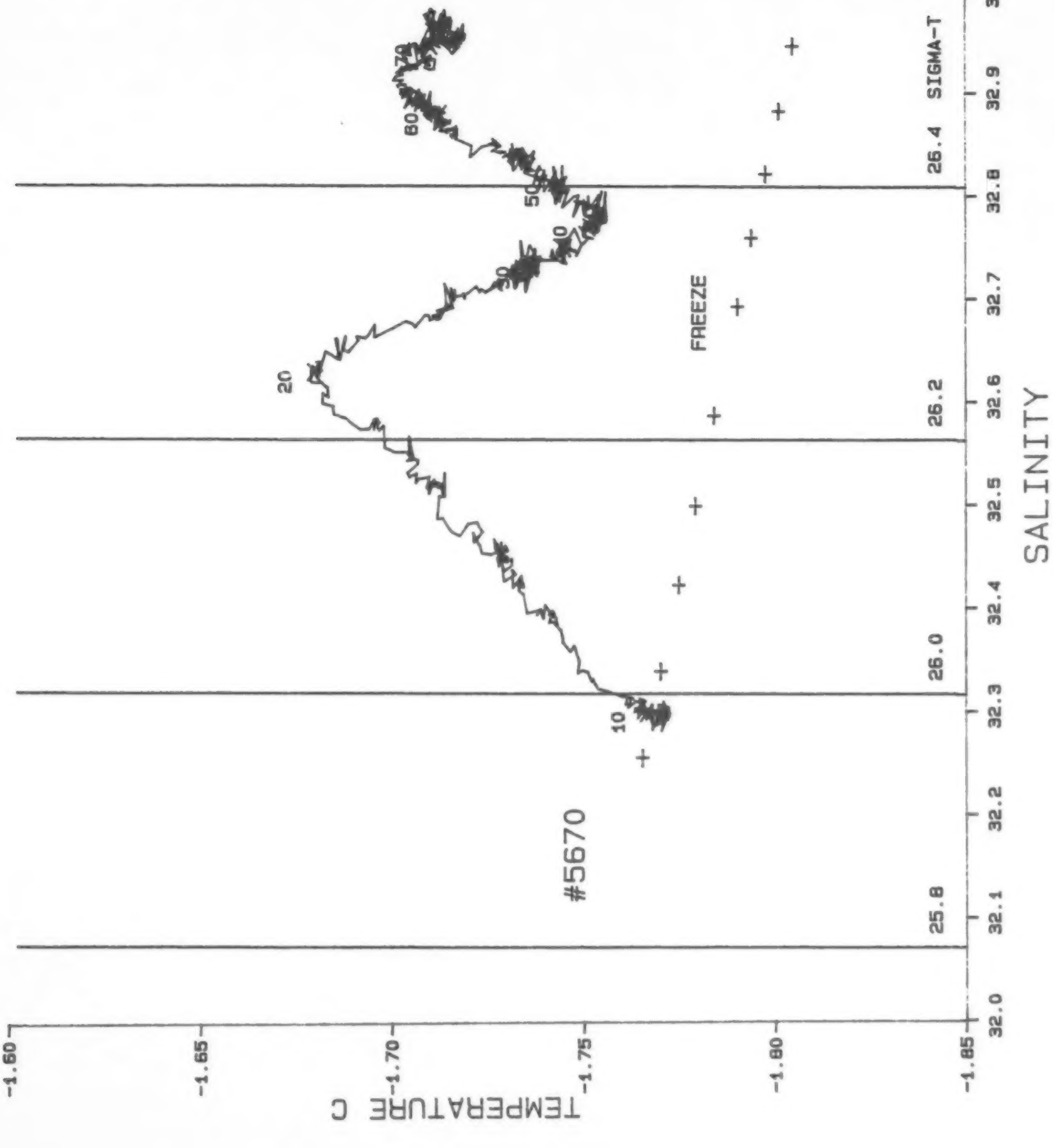
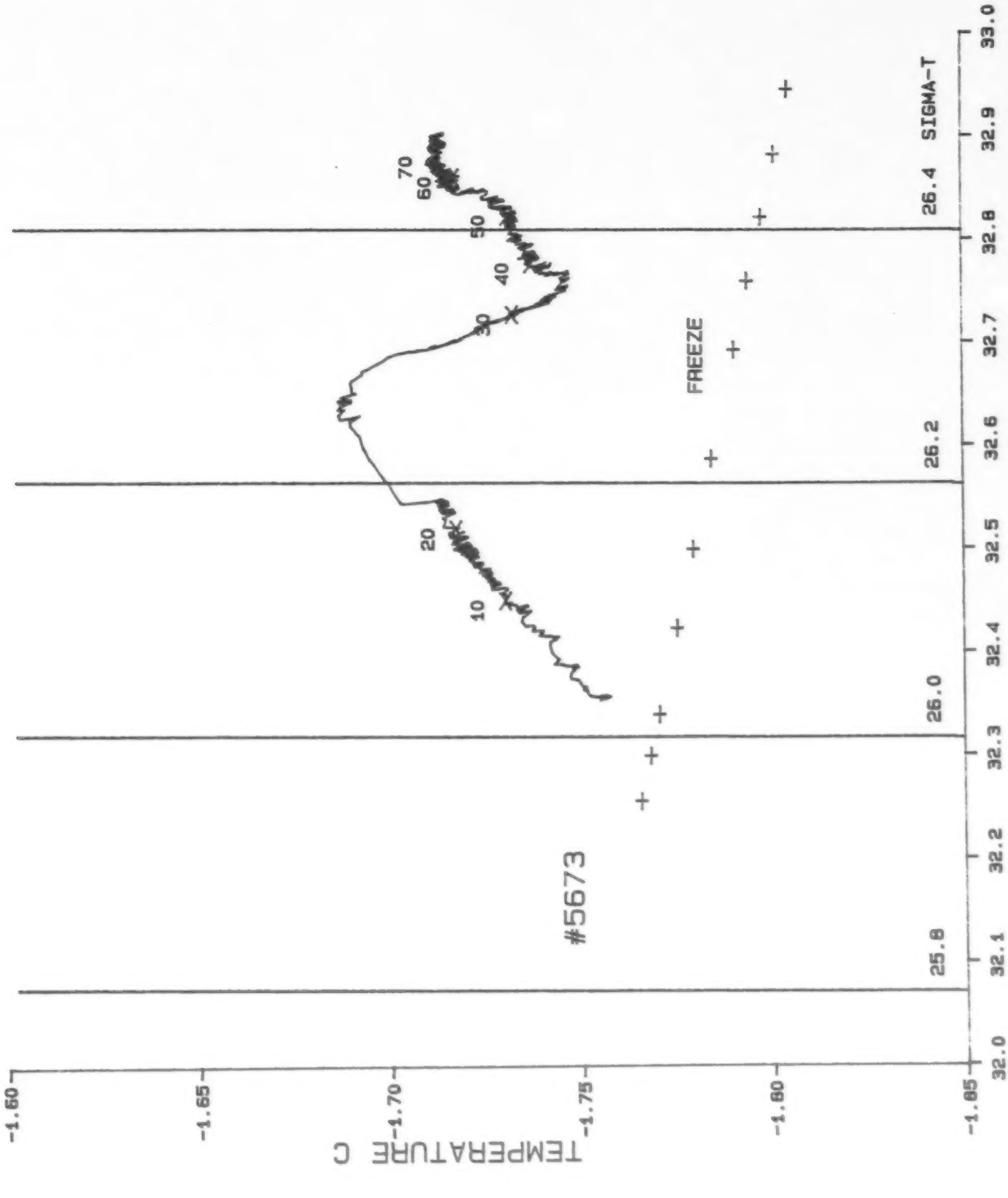


# T-S PLOT FOR EXP. No. 5670



# T-S PLOT FOR EXP. No. 5673



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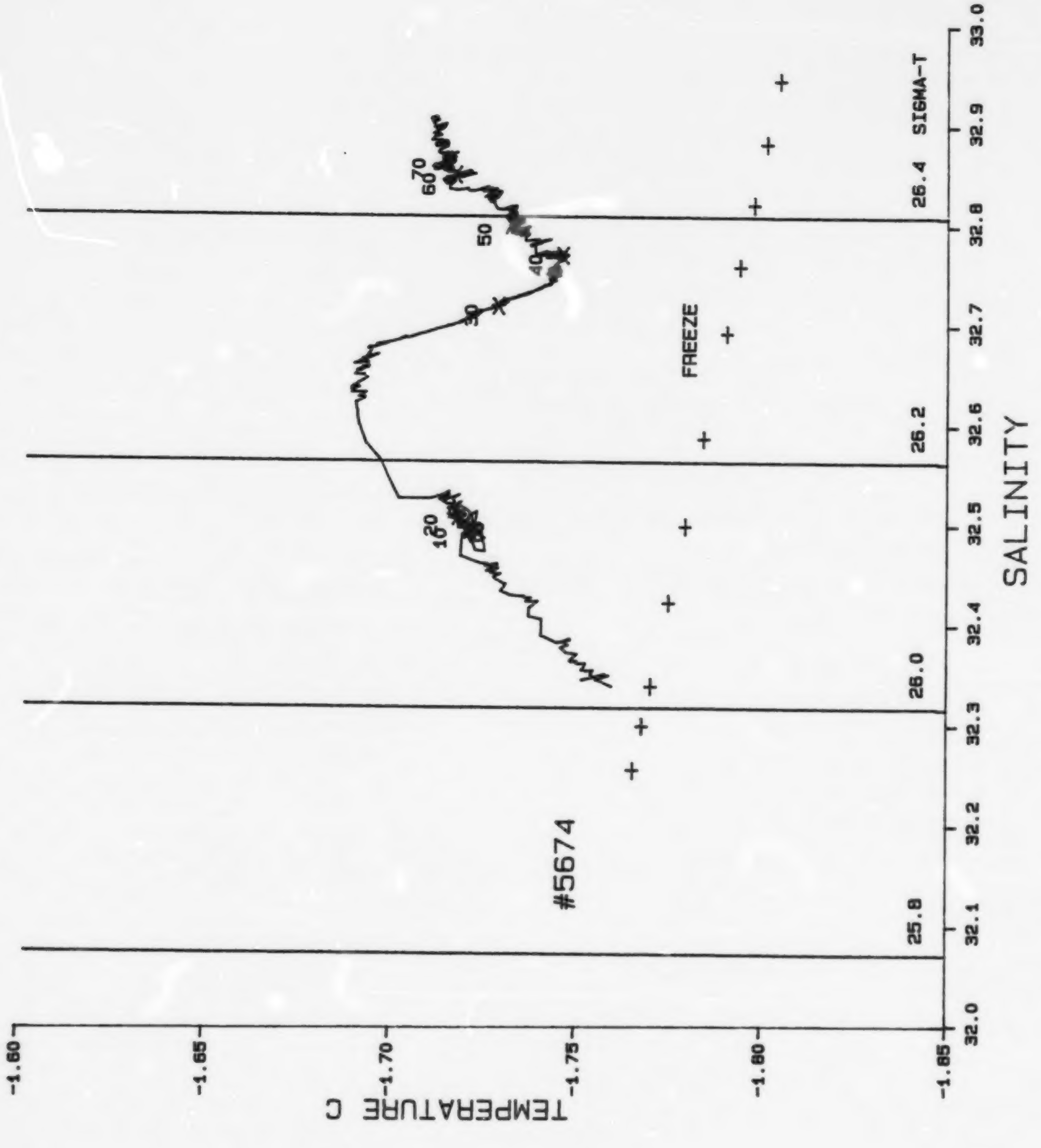
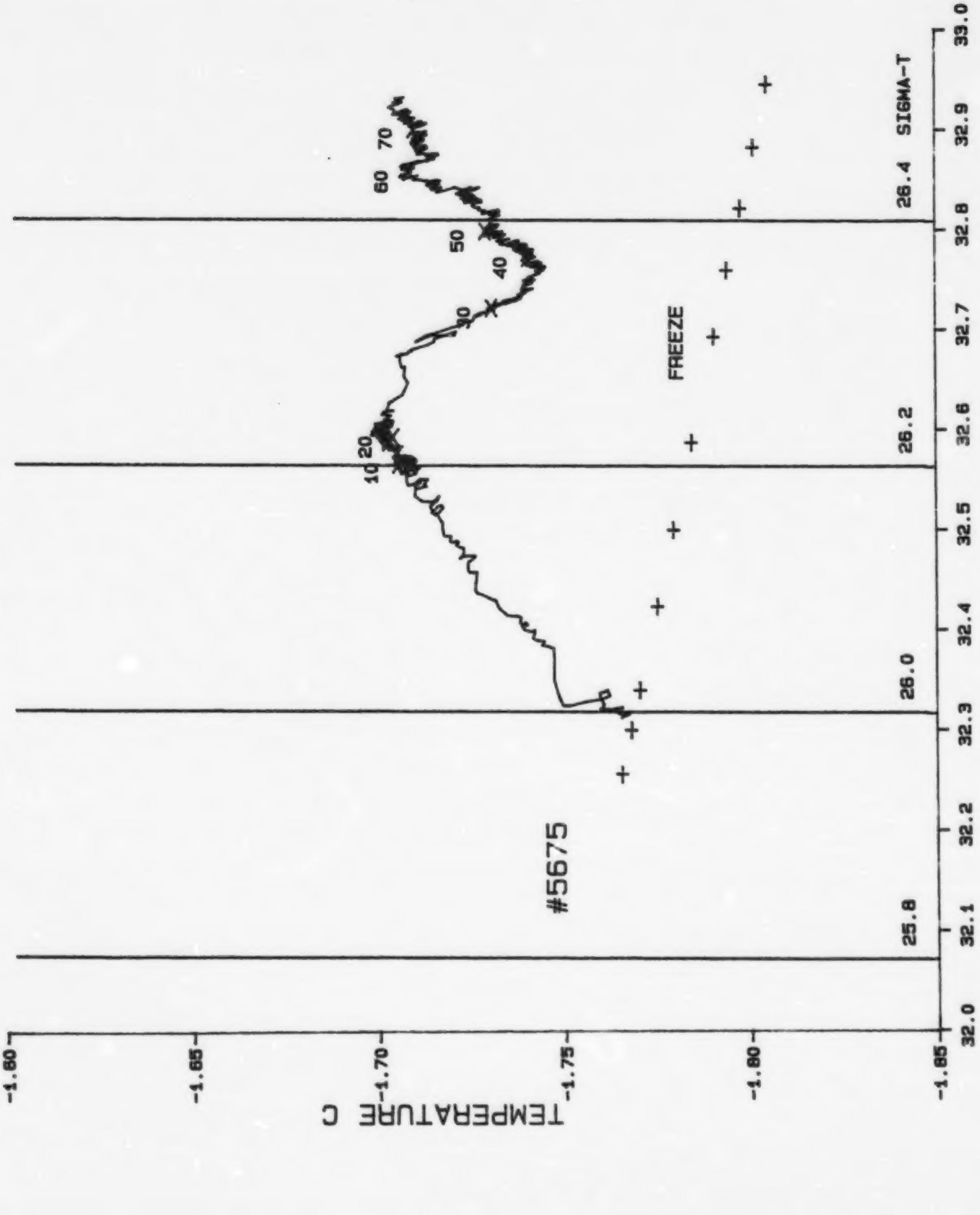
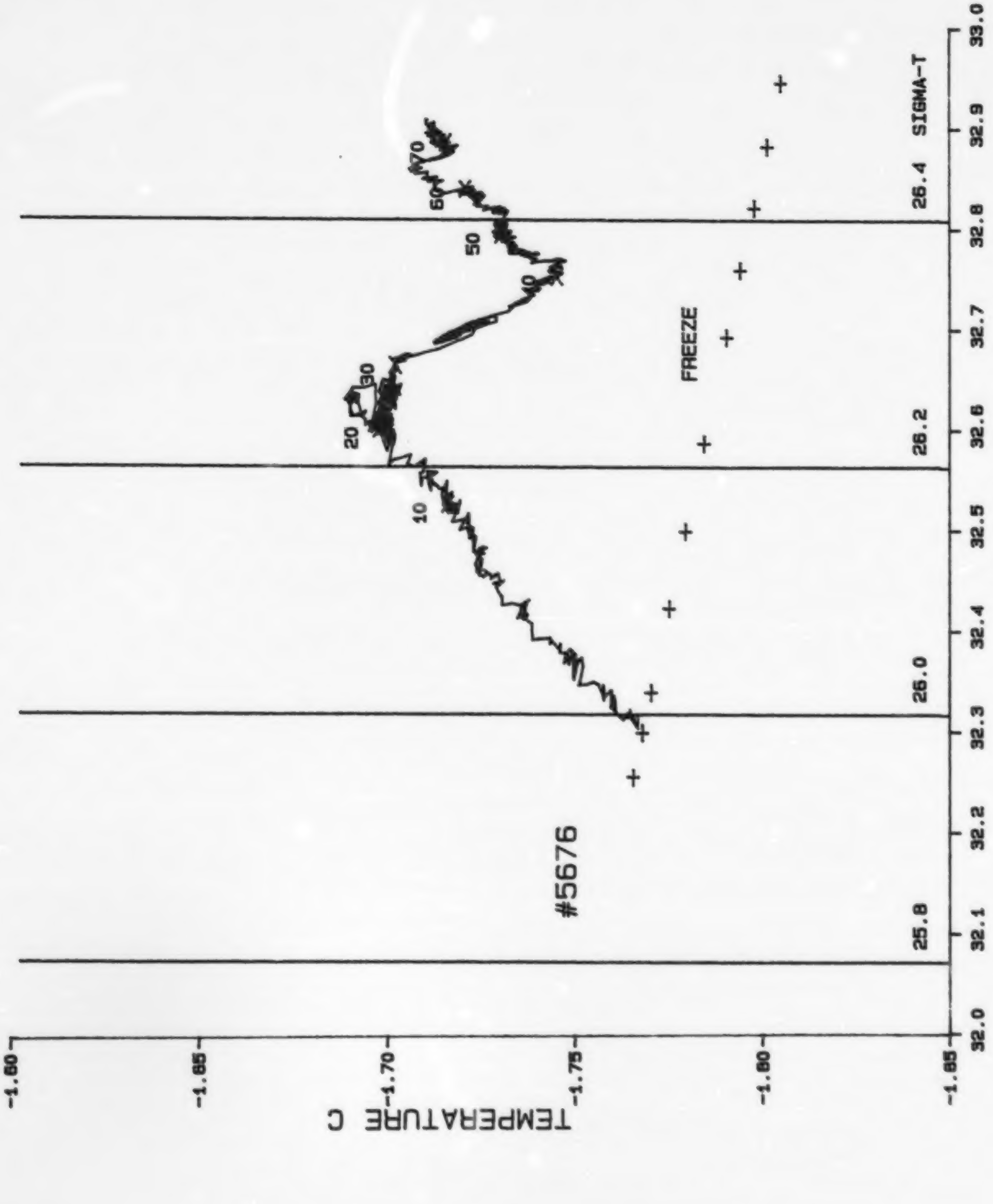


# T-S PLOT FOR EXP. No. 5675



# T-S PLOT FOR EXP. No. 5676



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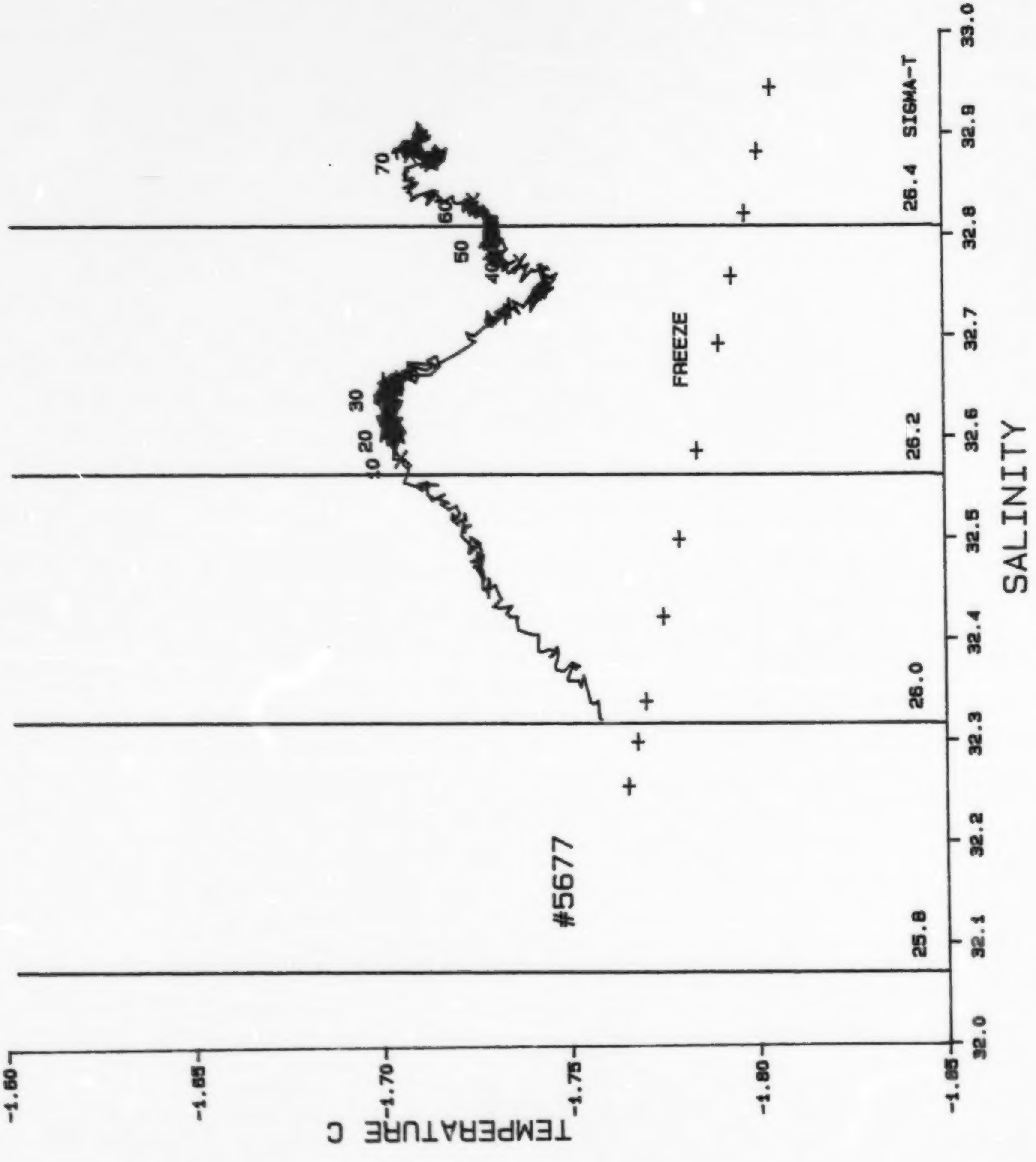

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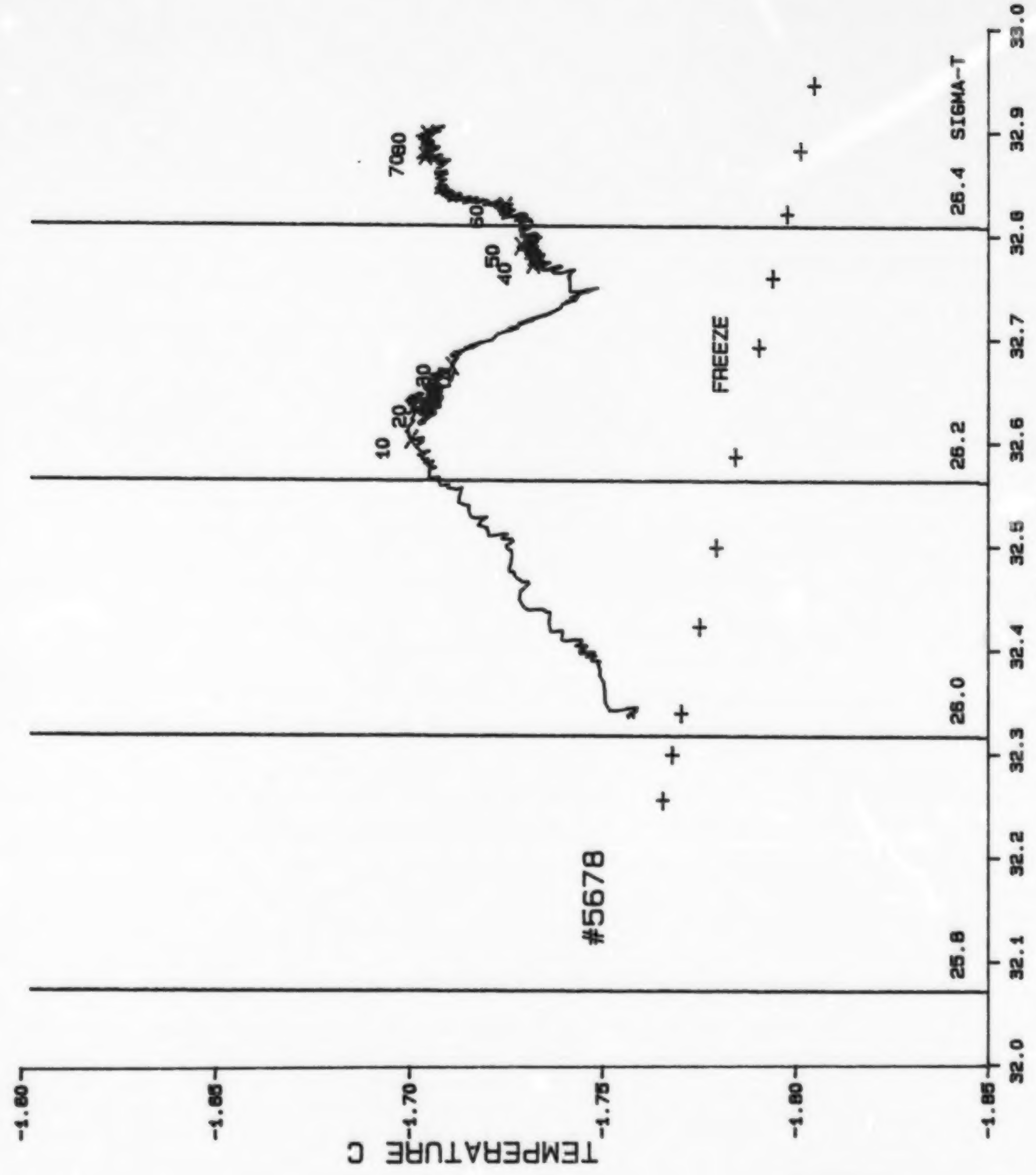

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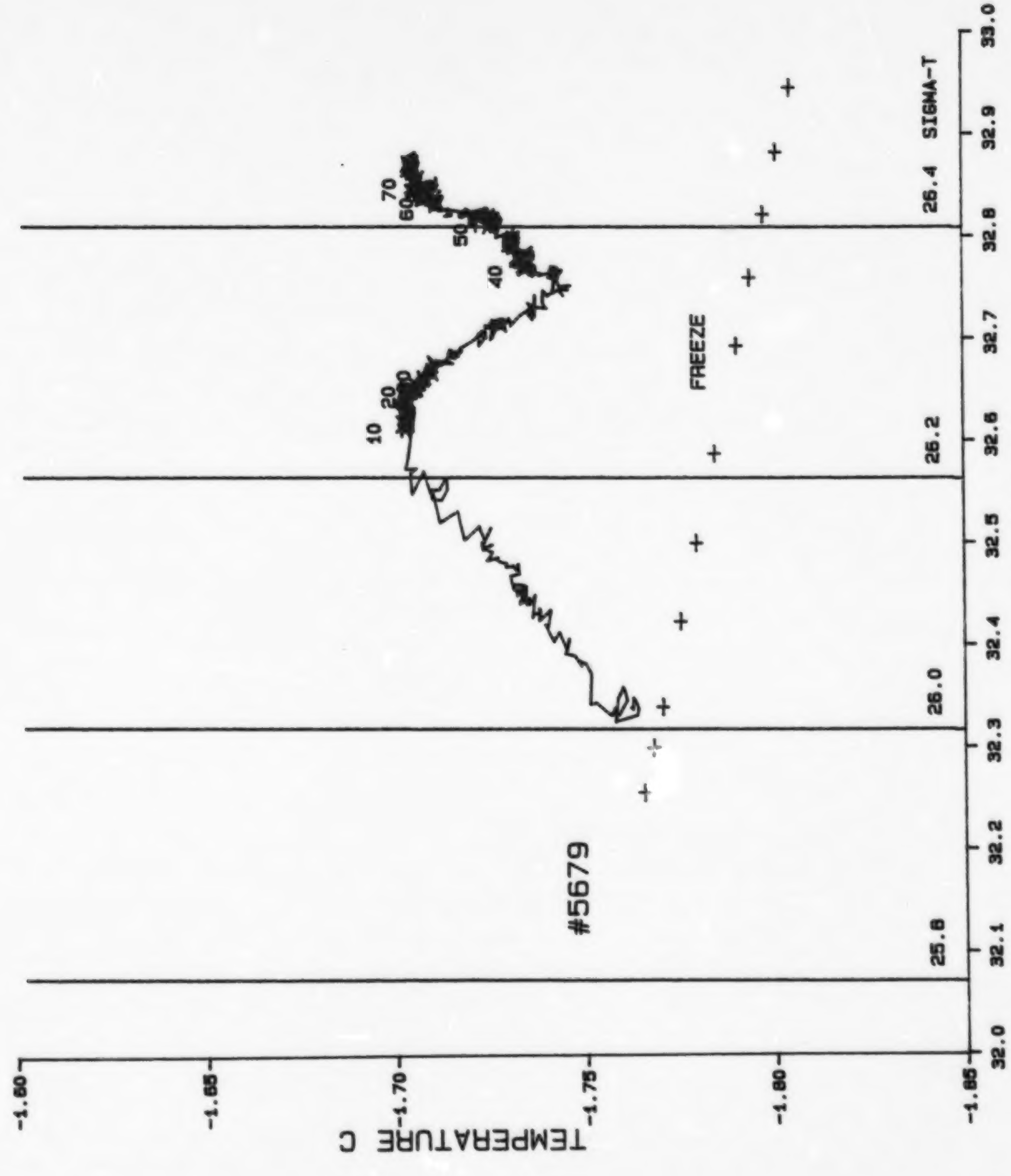

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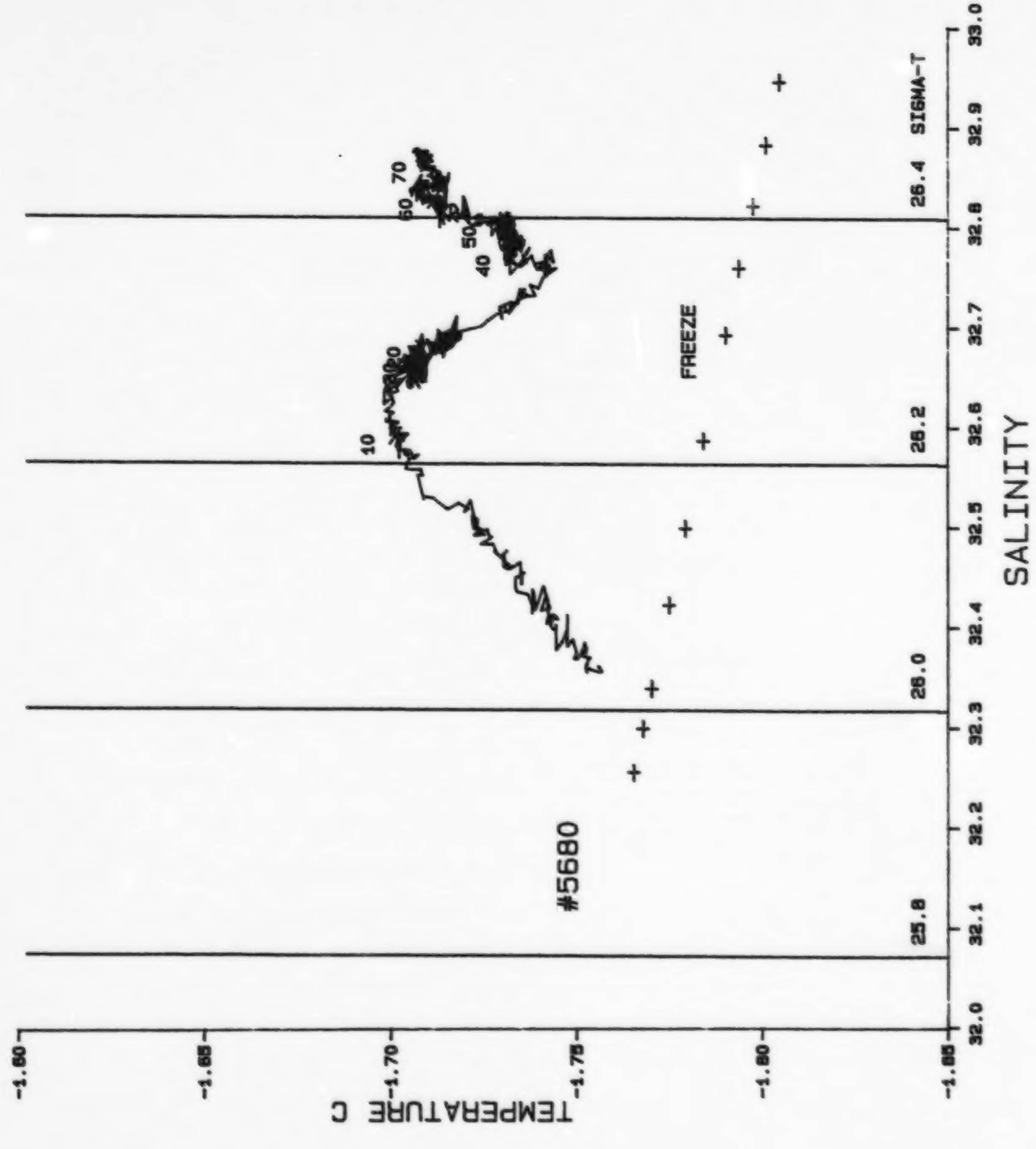

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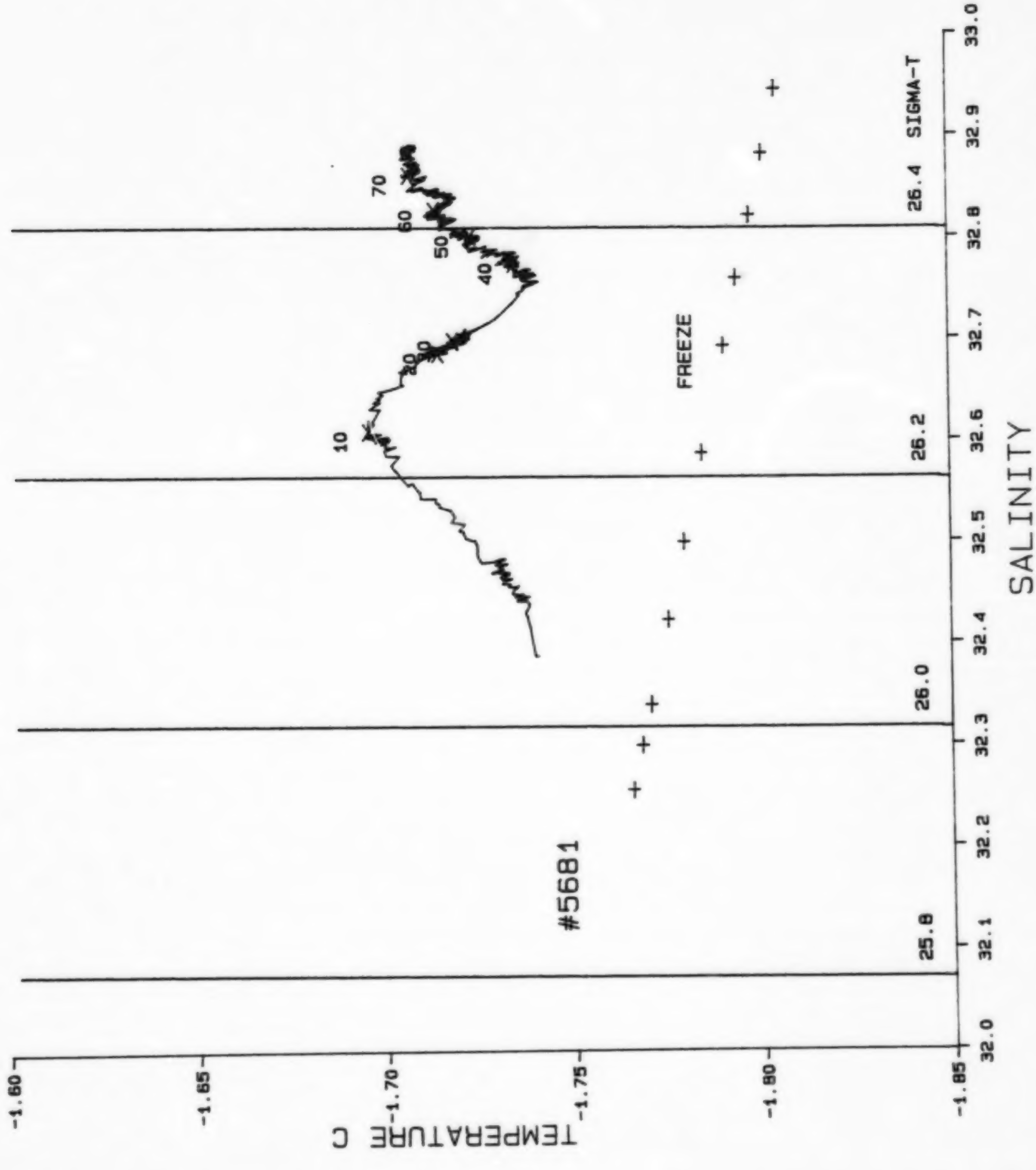

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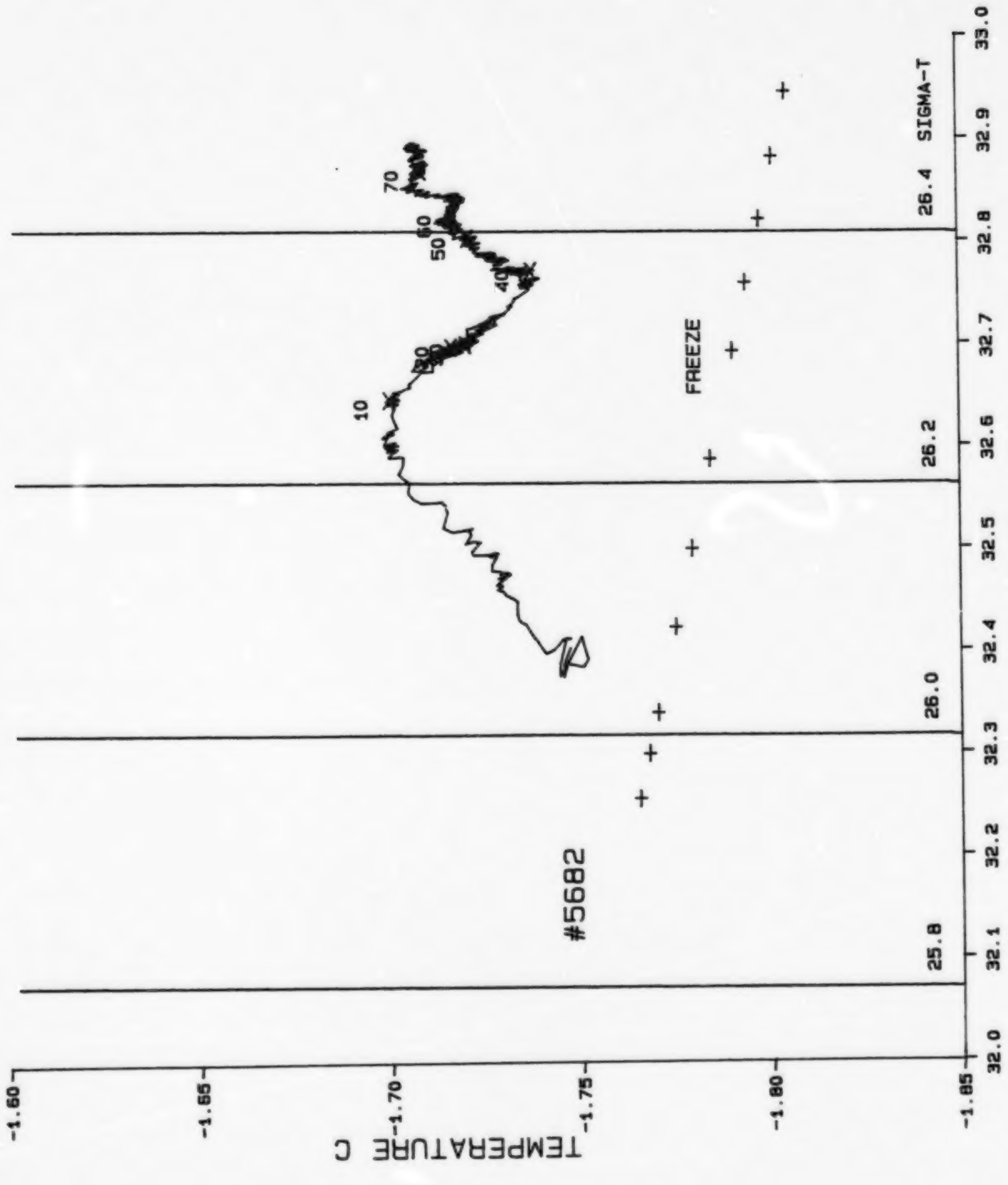

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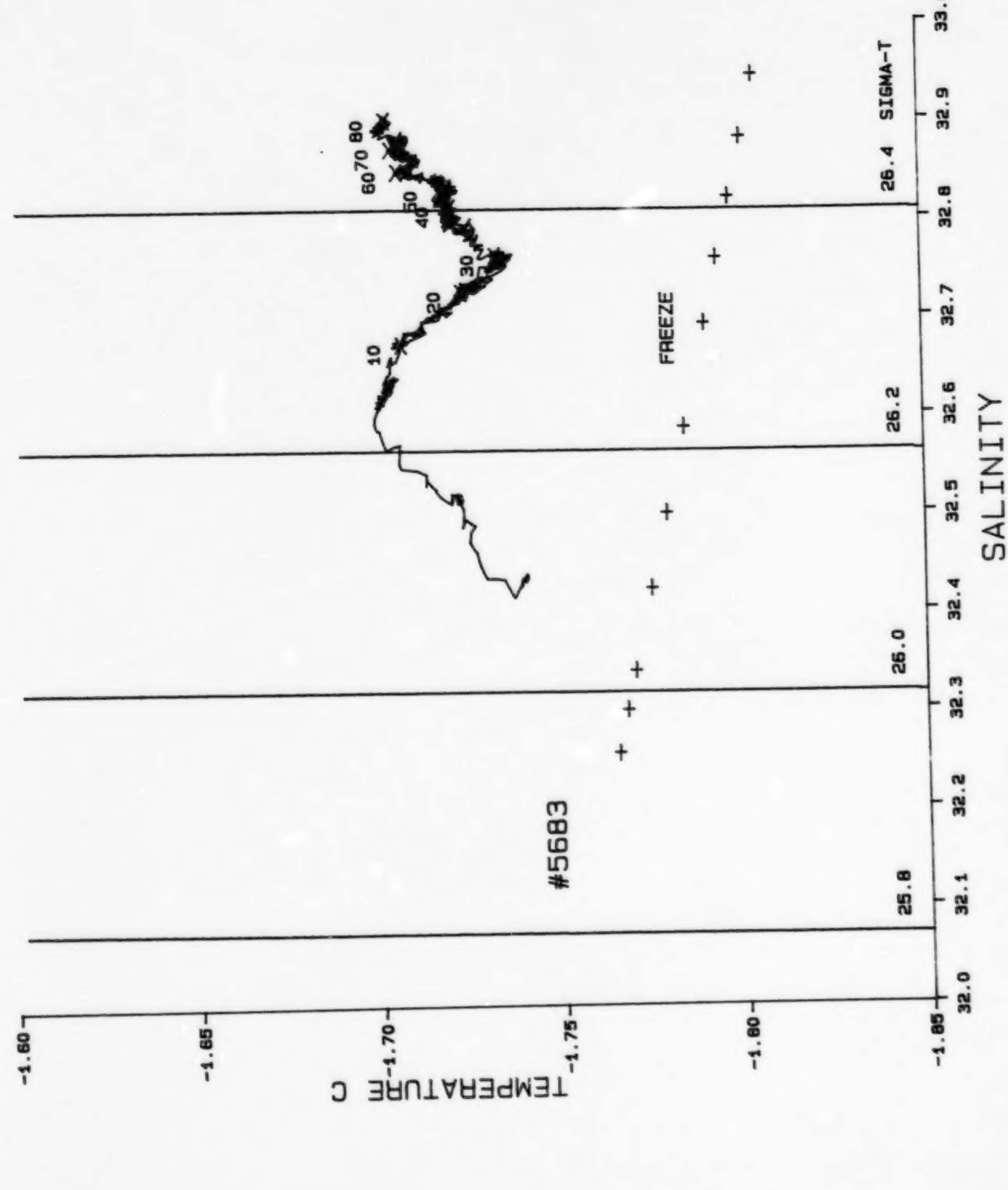

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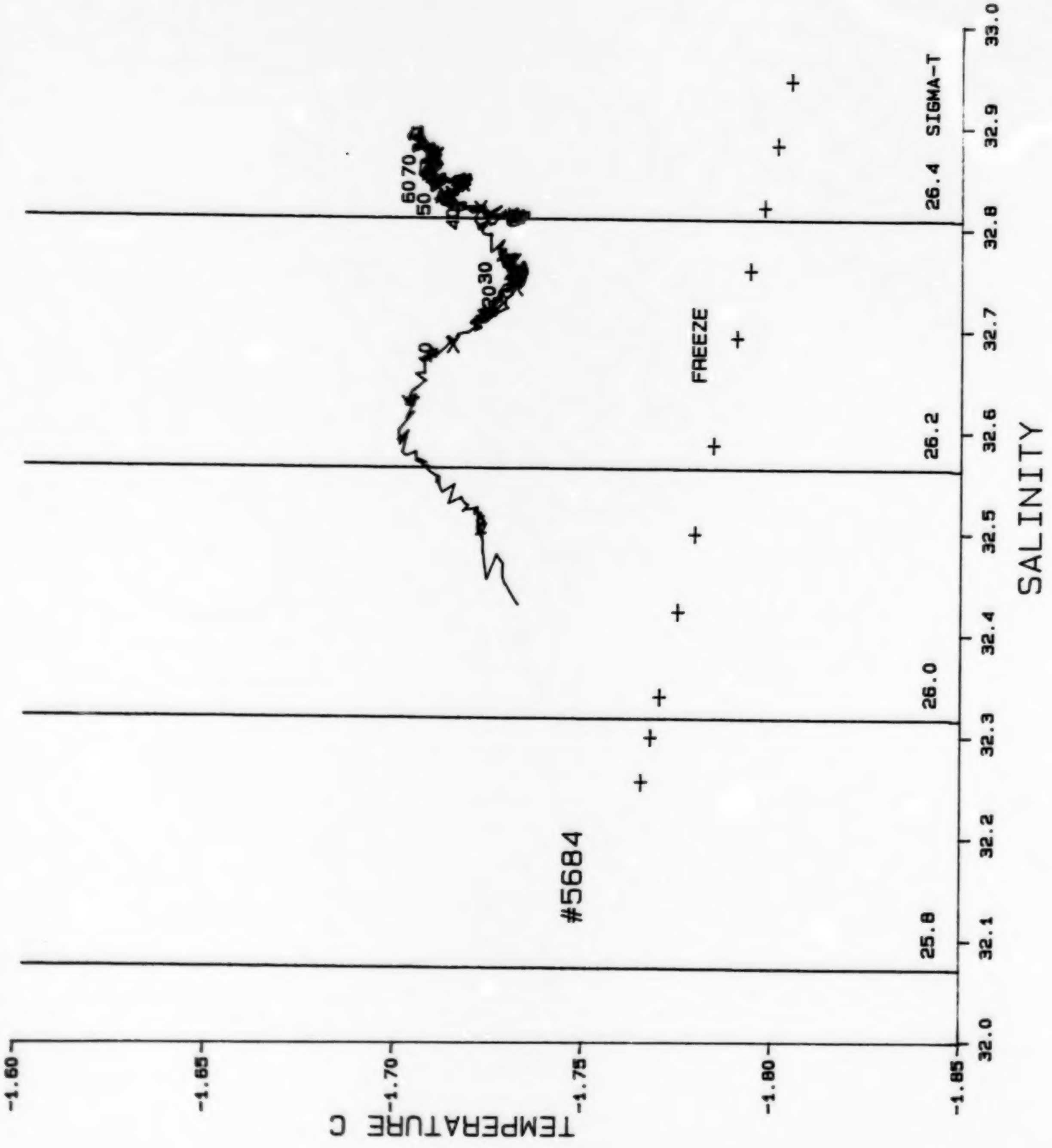

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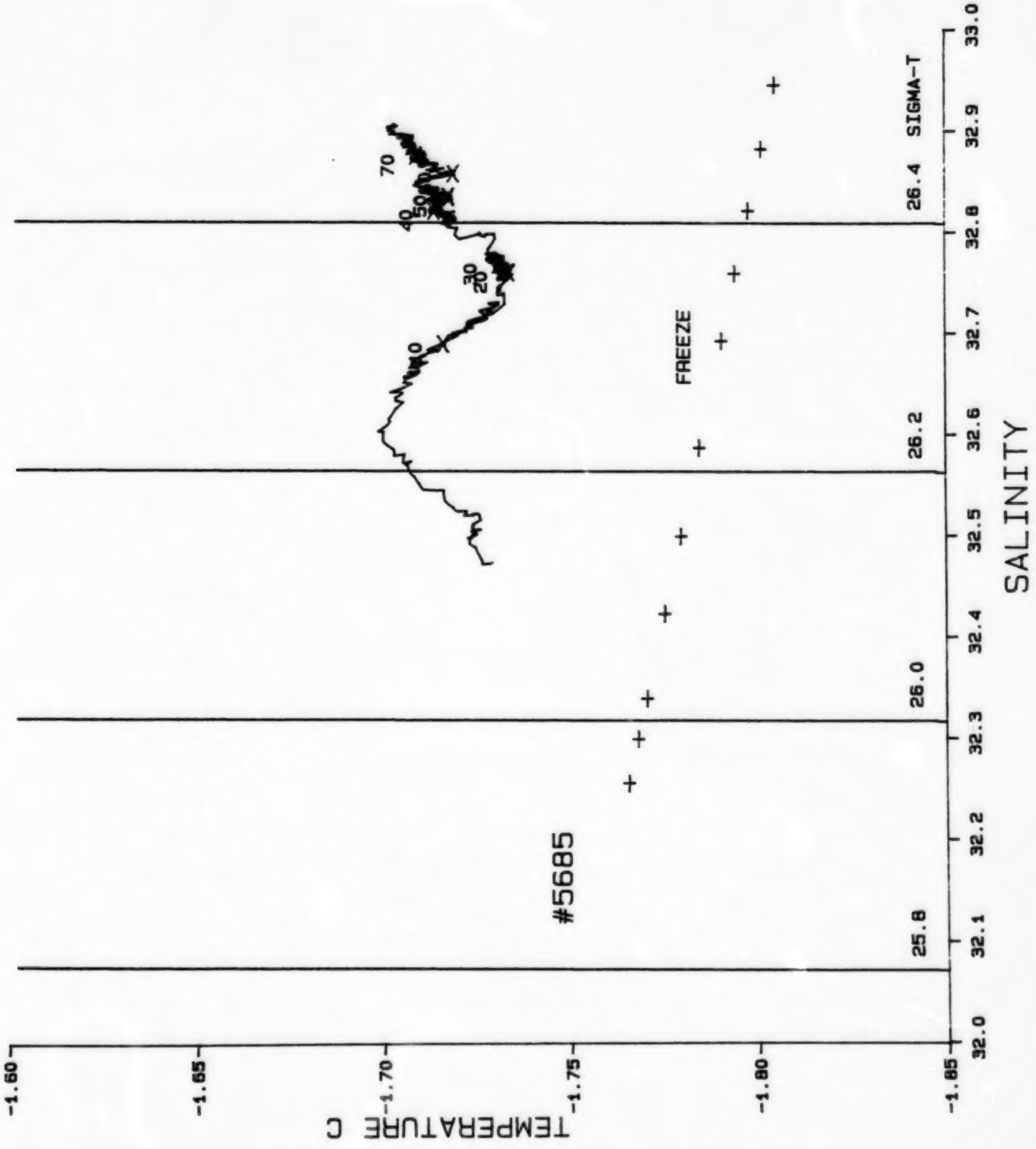
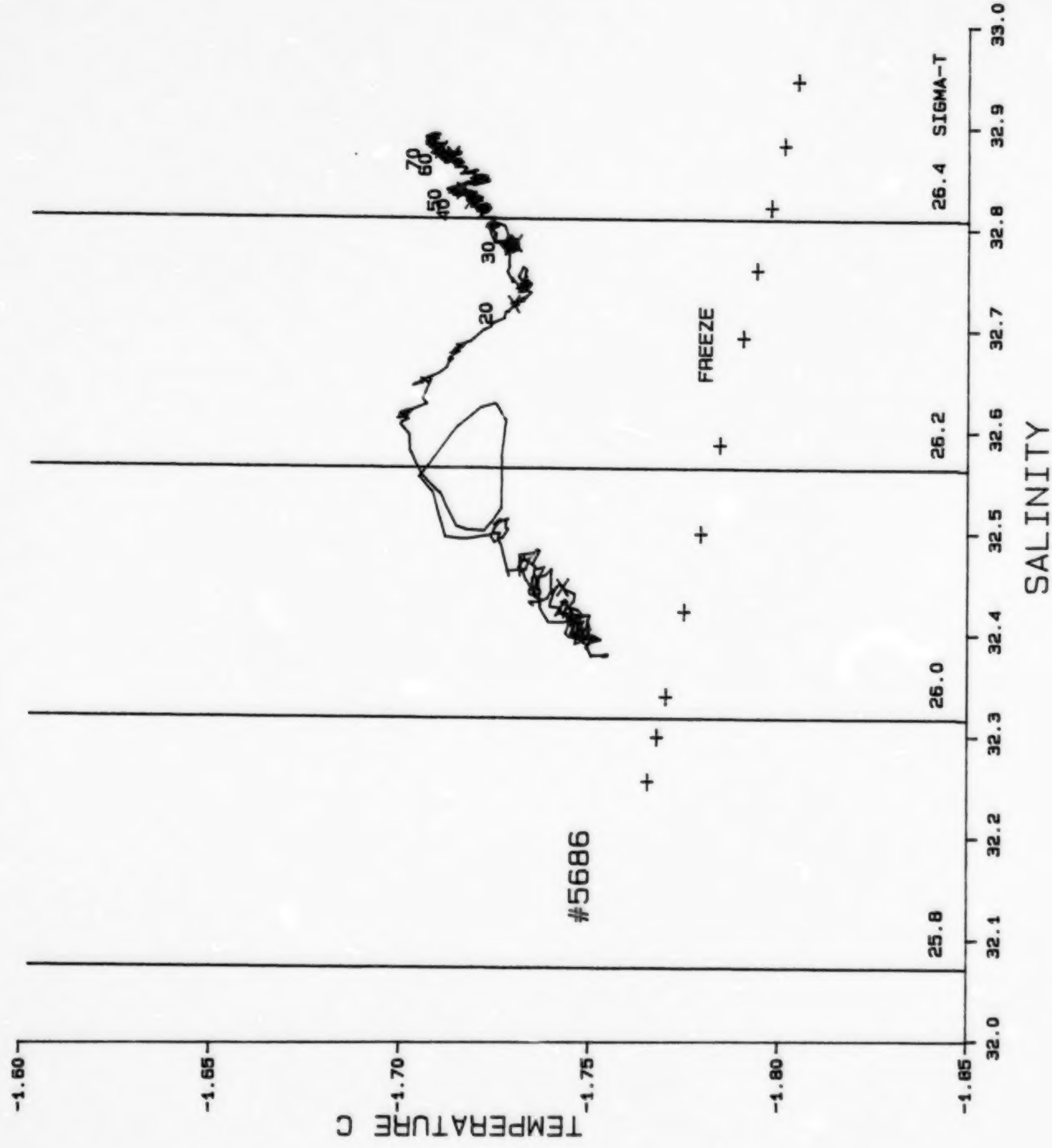
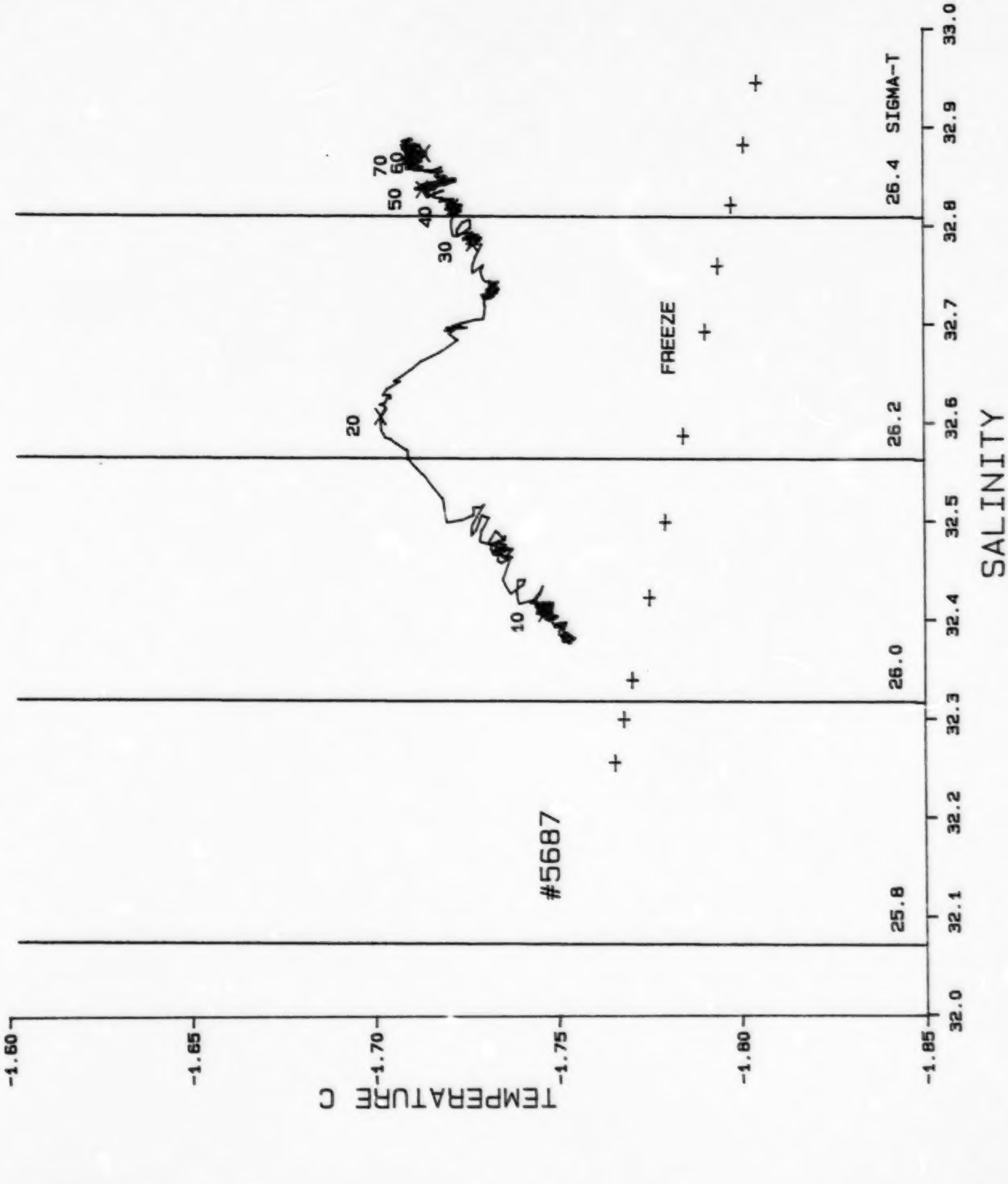


# T-S PLOT FOR EXP. No. 5686



# T-S PLOT FOR EXP. No. 5687



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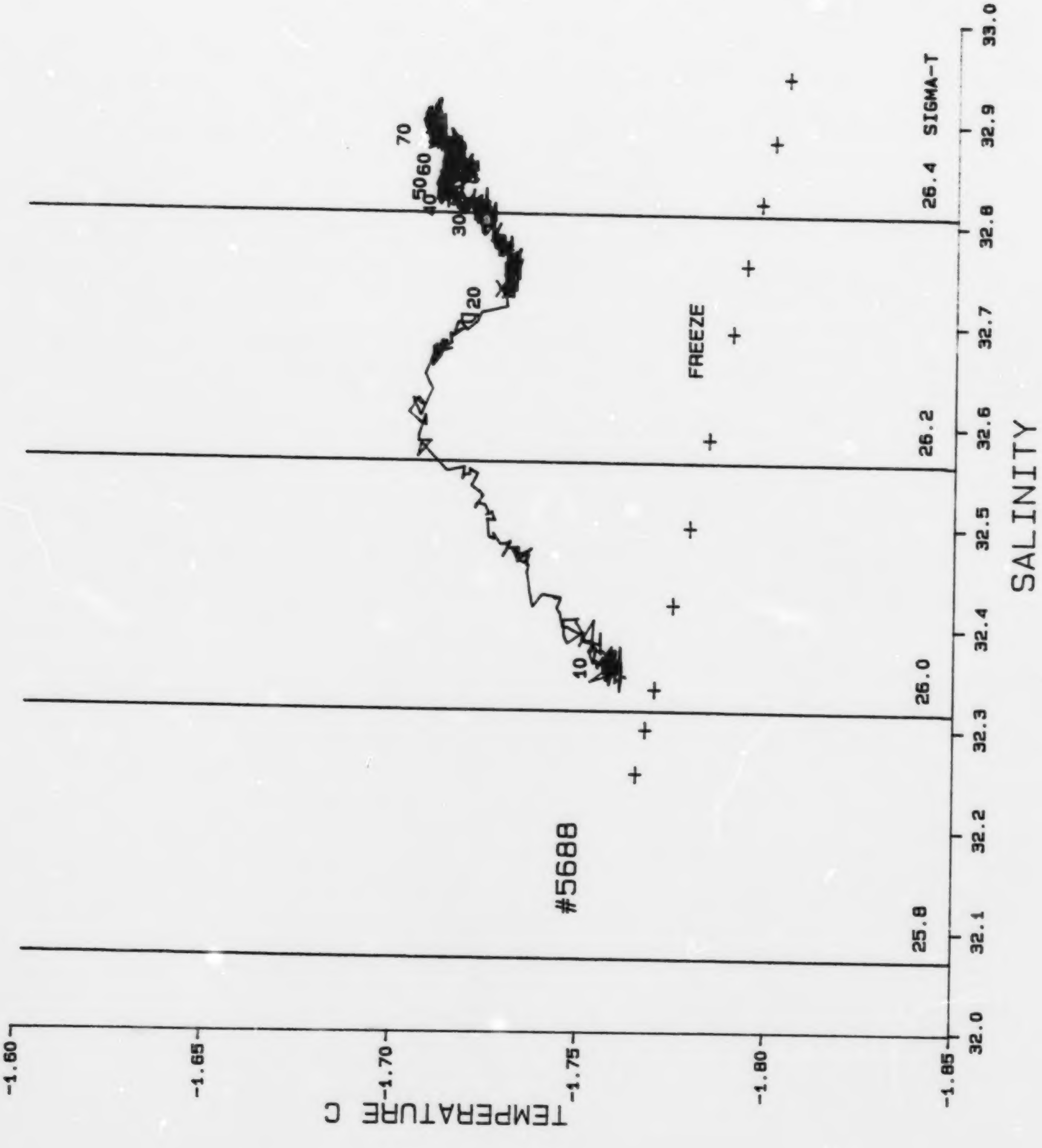
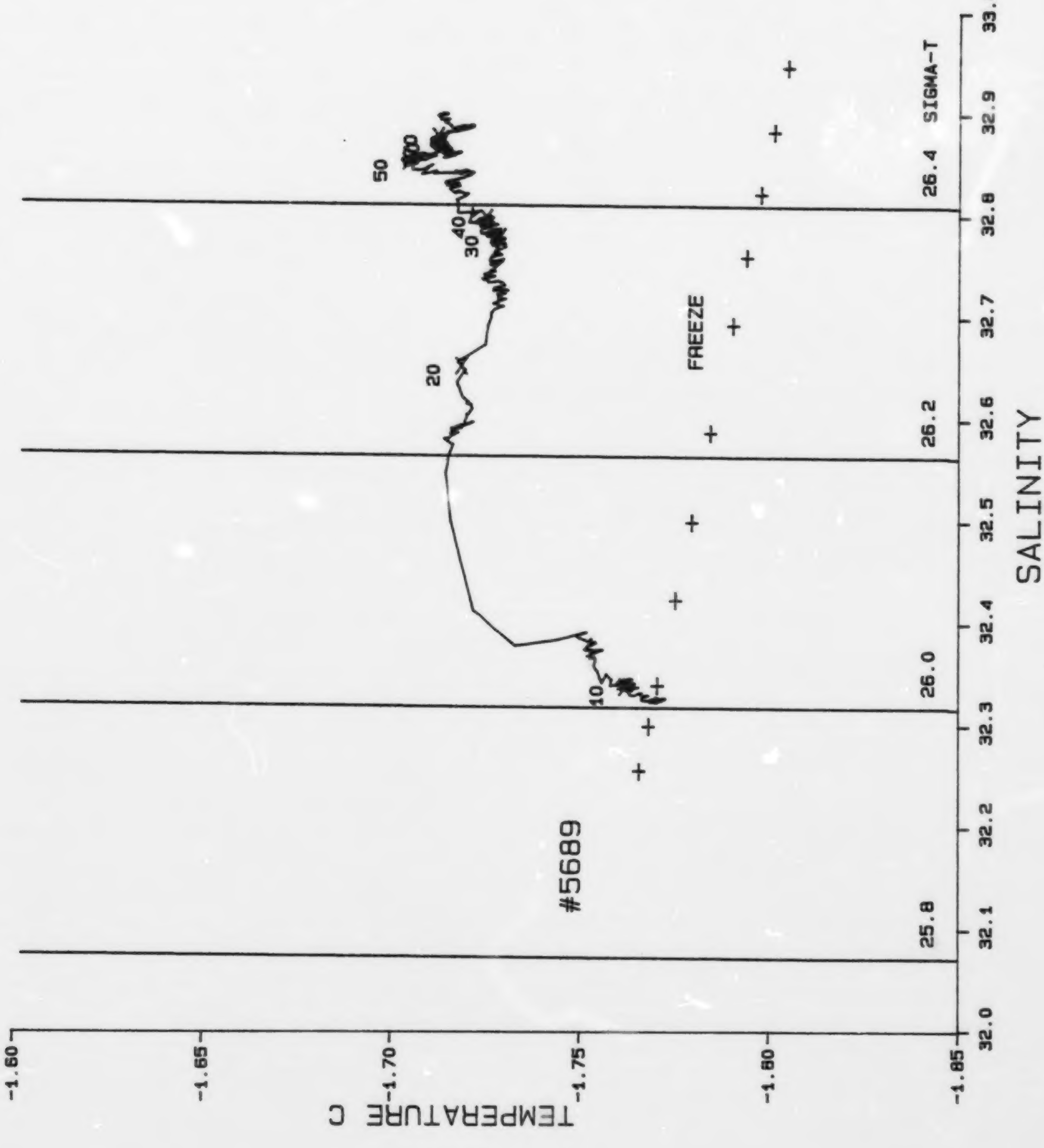


# T-S PLOT FOR EXP. No. 5689



# Appendix 4

## Index of acoustic data tapes

# ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 0 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 1A | 11:10 | 11:40 | 0 | 877 | |
| 2A | 11:40 | 12:12 | 886 | 1805 | |
| 1B | 12:11 | 12:42 | 1614 | 2228 | |
| 2B | 12:41 | 13:12 | 2238 | 2788 | |
| 3A | 13:11 | 13:42 | 2793 | 3274 | |
| 4A | 13:41 | 14:12 | 3281 | 3646/3724 | Gap at 14:02, power out. |
| 3B | 14:11 | 14:42 | 3728 | 4147 | |
| 4B | 14:41 | 15:12 | 4153 | 4551 | |
| 5A | 15:11 | 15:42 | 4558 | 4932 | Stand alond units turned on. |
| 6A | 15:41 | 16:12 | 4947 | 5308 | |
| 5B | 16:11 | 16:42 | 5313 | 5653 | |

## MULTIPLEXER SETTINGS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| TRANSDUCER No. | 2 | 1 | 3 | 4 | 5 | 6 | 7 | 8 |

# ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 0 TAPE: B

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 6B | 16:41 | 17:12 | 0009 | 884 | |
| 7A | 17:11 | 17:42 | 903 | 1595 | |
| 8A | 17:41 | 18:12 | 1607 | 2213 | |
| 7B | 18:11 | 18:42 | 2224 | 2755 | |
| 8B | 18:41 | 19:12 | 2766 | 3255 | |
| 9A | 19:11 | 19:42 | 3266 | 3721 | |
| 10A | 19:41 | 20:12 | 3730 | 4150 | |
| 9B | 20:11 | 20:42 | 4160 | 4551 | |
| 10B | 20:41 | | 4562 | 4797 | Stopped at 339 counts, short record |
| 11A | 21:12 | 21:42 | 4804 | 5163 | |
| 12A | 21:41 | 22:12 | 5165 | 5520 | |

## MULTIPLEXER SETTINGS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| TRANSDUCER No. | 2 | 1 | 3 | 4 | 5 | 6 | 7 | 8 |

## ACOUSTIC DATA VIDEO TAPE LOG SHEET

**SERIES:** 0 **TAPE:** C

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 11B | 22:11 | 22:42 | 0011 | 0888 | |
| 12B | 22:41 | 23:12 | 908 | 1600 | |
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### MULTIPLEXER SETTINGS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| TRANSDUCER No. | 2 | 1 | 3 | 4 | 5 | 6 | 7 | 8 |

## ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 1 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 1A | 00:00 | 00:31 | 0007 | 895 | Small gap at start |
| 2A | 00:30 | 01:01 | 907 | 1608 | |
| 1B | 01:00 | 01:31 | 1617 | 2215 | |
| 2B | 01:30 | 02:01 | 2225 | 2763 | |
| 3A | 02:00 | 02:31 | 2771 | 3258 | |
| 4A | 02:30 | 03:01 | 3261 | 3713 | |
| 3B | 03:00 | 03:31 | 3716 | 4136 | |
| 4B | 03:30 | 04:01 | 4142 | 4538 | |
| 5A | 04:00 | 04:31 | 4546 | 4922 | |
| 6A | 04:30 | 05:01 | 4930 | 5286 | |
| 5B | 05:00 | 05:31 | 5293 | 5635 | |

## MULTIPLEXER SETTINGS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| TRANSDUCER No. | 9 | 10 | 2 | 4 | 6 | 7 | 8 | 1 |

# ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 1 TAPE: B

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 6B | 05:30 | 06:01 | 0013 | 0888 | |
| 7A | 06:00 | 06:31 | 0896 | 1586 | |
| 8A | 06:30 | 07:01 | 1593 | 2193 | |
| 7B | 07:00 | 07:31 | 2200 | 2734 | |
| 8B | 07:30 | 08:01 | 2740 | 3229 | |
| 9A | 08:00 | 08:31 | 3237 | 3687 | |
| 10A | 08:30 | 09:01 | 3695 | 4112 | |
| 9B | 09:00 | 09:31 | 4114 | 4505 | |
| 10B | 09:30 | 10:01 | 4516 | 4892 | |
| 11A | 10:00 | 10:31 | 4900 | 5253 | |
| 12A | 10:30 | 11:01 | 5261 | 5600 | |

## MULTIPLEXER SETTINGS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| TRANSDUCER No. | 9 | 10 | 2 | 4 | 6 | 7 | 8 | 1 |

# ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 1 TAPE: C

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 11B | 11:00 | 11:31 | 0009 | 887 | |
| 12B | 11:30 | 12:01 | 893 | 1597 | |
| 13A | 12:00 | 12:31 | 1604 | 2218 | |
| 14A | 12:30 | 13:01 | 2224 | 2764 | |
| 13B | 13:00 | 13:01 | 2773 | 3273 | |
| 14B | 13:30 | 14:01 | 3280 | 3733 | |
| 15A | 14:00 | 14:31 | 3739 | 4148 | |
| 16A | 14:30 | 15:01 | 4152 | 4555 | |
| 15B | 15:00 | 15:31 | 4503 | 4939 | |
| 16B | 15:30 | 16:01 | 4949 | 5311 | |
| 17A | 16:00 | 16:31 | 5318 | 5666 | |

## MULTIPLEXER SETTINGS

| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| TRANSDUCER No. | 9 | 10 | 2 | 4 | 6 | 7 | 8 | 1 |

# ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 1 TAPE: D

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 18A | 16:30 | 17:01 | 0015 | 893 | |
| 17B | 17:00 | 17:31 | 904 | 1612 | |
| 18B | 17:30 | 18:01 | 1620 | 2226 | Transducer #9 only. |
| 19A | 18:30 | 19:01 | 2237 | 2778 | #1 and #9 only. |
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## MULTIPLEXER SETTINGS

| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| TRANSDUCER No. | 9 | 10 | 2 | 4 | 6 | 7 | 8 | 1 |
| 18B | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 19A | 9 | 1 | 9 | 1 | 9 | 1 | 9 | 1 |

## ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 2 TAPE: A 29/4/85

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 1A | 04:00 | 04:31 | 0011 | 883 | |
| 2A | 04:30 | 05:01 | 892 | 1603 | |
| 1B | 05:00 | 05:31 | 1626 | 2227 | |
| 2B | 05:30 | 06:01 | 2291 | 2818 | |
| 3A | 06:00 | 06:31 | 2857 | 3336 | |
| 4A | 06:30 | 07:01 | 3343 | 3790 | |
| 3B | 07:00 | 07:31 | 3796 | 4207 | |
| 4B | 07:30 | 08:01 | 4214 | 4609 | |
| 5A | 08:00 | 08:31 | 4617 | 4988 | |
| 6A | 08:30 | 09:01 | 4995 | 5350 | |
| 5B | 09:00 | 09:31 | 5355 | 5700 | |

### MULTIPLEXER SETTINGS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| TRANSDUCER No. | 9 | 10 | 2 | 4 | 6 | 7 | 8 | 1 |

# ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 2 TAPE: B 29/4/85

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 6B | 09:31:15 | 10:01 | 0009 | 848 | |
| 7A | 10:00 | 10:31 | 858 | 1567 | |
| 8A | 10:30 | 11:01 | 1578 | 2188 | |
| 7B | 11:00 | 11:31 | 2195 | 2732 | |
| 8B | 11:30 | 12:01 | 2739 | 3231 | |
| 9A | 12:00 | 12:31 | 3238 | 3690 | |
| 10A | 12:30 | 13:01 | 3696 | 4122 | |
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## MULTIPLEXER SETTINGS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| TRANSDUCER No. | 9 | 10 | 2 | 4 | 6 | 7 | 8 | 1 |

## ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 4 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 1A | 04:02 | 04:31 | 0012 | 889 | |
| 2A | 04:30 | 05:01 | 898 | 1589 | |
| 1B | 05:00 | 05:31 | 1596 | 2205 | |
| 2B | 05:30 | 06:01 | 2213 | 2755 | |
| 3A | 06:00 | 06:31 | 2761 | 3249 | |
| 4A | 06:30 | 07:01 | 3256 | 3710 | |
| 3B | 07:00 | 07:31 | 3715 | 4139 | |
| 4B | 07:30 | 08:01 | 4146 | 4546 | |
| 5A | 08:00 | 08:31 | 4551 | 4928 | |
| 6A | 08:30 | 09:01 | 4933 | 5291 | |
| 5B | 09:00 | 09:31 | 5297 | 5637 | |

MULTIPLEXER SETTINGS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| TRANSDUCER No. | 9 | 10 | 2 | 3 | 4 | 5 | 6 | 7 |

# ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 4 TAPE: B

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 6B | 09:30 | 10:01 | 0011 | 885 | |
| 7A | 10:00 | 10:31 | 893 | 1597 | |
| 8A | 10:30 | 11:01 | 1605 | 2211 | |
| 7B | 11:00 | 11:31 | 2219 | 2755 | |
| 8B | 11:30 | 12:01 | 2762 | 3249 | |
| 9A | 12:00 | 12:31 | 3255 | 3694 | Recorded at "LP" speed |
| 10A | 12:30 | 13:01 | 3700 | 4339 | " " " " |
| 9B | 13:00 | 13:31 | 4347 | 4921 | " " " " |
| 10B | 13:30 | 14:01 | 4927 | 5461 | " " " " |
| | | | | | |
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MULTIPLEXER SETTINGS

| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| TRANSDUCER No. | 9 | 10 | 2 | 3 | 4 | 5 | 6 | 7 |

# ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 5 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 1A | 19:00 | 19:31 | 0013 | 1256 | Transducer 1 only |
| 2A | 19:30 | 20:01 | 1270 | 2213 | " " " |
| 1B | 20:00 | ? | 2221 | 2338 | not ½ hr of data on tape. |
| | | | | | |
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## MULTIPLEXER SETTINGS

| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| TRANSDUCER No. | - | 1 | - | - | - | - | - | - |

## ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 6 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 1A | 06:00 | 06:31 | 0011 | 882 | |
| 2A | 06:30 | 07:01 | 892 | 1596 | |
| 1B | 07:00 | 07:31:30 | 1603 | 2217 | |
| 2B | 07:30 | 08:01 | 2224 | 2766 | |
| 3A | 08:00 | 08:31 | 2774 | 3263 | |
| 4A | 08:30 | 09:01 | 3269 | 3719 | |
| 3B | 09:00 | 09:31 | 3726 | 4148 | |
| 4B | 09:30 | 10:01 | 4153 | 4552 | |
| 5A | 10:00 | 10:31 | 4558 | 4939 | |
| 6A | 10:30 | 11:01 | 4947 | 5309 | |
| 5B | 11:00 | 11:31 | 5312 | 5655 | |

### MULTIPLEXER SETTINGS

| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| TRANSDUCER No. | 9 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

# ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 6 TAPE: B

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 6B | 11:30 | 12:01 | 0012 | 889 | |
| 7A | 12:00 | *--- | 897 | 1375 | *Cassette tape stopped at unknown time for some reason. Approx 10 min. data lost. Ran approx. 21 min. before stopping. |
| 8A | 12:30 | 13:01 | 1382 | 2013 | |
| 7B | 13:00 | 13:31 | 2020 | 2575 | |
| 8B | 13:30 | 14:02 | 2581 | 3094 | |
| 9A | 14:02 | 14:31 | 3099 | 3525 | |
| 10A | 14:30 | 15:01 | 3532 | 3970 | |
| | | | | | |
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## MULTIPLEXER SETTINGS

| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| TRANSDUCER No. | 9 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 7 TAPE: A

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 1A | 06:00 | 06:31 | 0007 | 0882 | |
| 2A | 06:30 | 07:01 | 0888 | 1581 | |
| 1B | 07:00 | 07:31 | 1586 | 2187 | |
| 2B | 07:30 | 08:01 | 2193 | 2731 | |
| 3A | 08:00 | 08:31 | 2743 | 3233 | |
| 4A | 08:30 | 09:01 | 3239 | 3690 | |
| 3B | 09:00 | 09:31 | 3696 | 4119 | |
| 4B | 09:30 | 10:01 | 4125 | 4530 | |
| 5A | 10:00 | 10:31 | 3536 | 4912 | |
| 6A * | 10:30:45 | 11:01 | 4921 | 5272 | |
| 6B * | 11:02 | 11:31 | 5279 | 5602 | Tape not used? |

MULTIPLEXER SETTINGS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| TRANSDUCER No. | 9 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

# ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 7 TAPE: B

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 7A | 11:30 | 12:01 | 0021 | 897 | |
| 8A | 12:00 | 12:31 | 911 | 1614 | |
| 7B | 12:30 | 13:01 | 1621 | 2222 | |
| 8B | 13:00 | 13:31 | 2232 | 2766 | |
| 9A | 13:30 | 14:01 | 2771 | 3257 | Mislabel? Tape received as in series 2 #5A,B |
| 10A | 14:00 | 14:02 | 3265 | 3720 | Mislabel? " " |
| 9B | 14:30 | 14:01 | 3227 | 4146 | |
| 10B | 15:00 | 15:31 | 4152 | 4550 | |
| 11A | 15:30 | 16:01 | 4554 | 4929 | |
| 12A | 16:00 | 16:31 | 4934 | 5290 | |
| 11B | 16:31 | 17:01 | 5293 | 5635 | |

## MULTIPLEXER SETTINGS

| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| TRANSDUCER No. | 9 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9B + part of 10B | 9 | (1)+ | – | – | – | – | – | – |
| part of 10B-12B | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |

+5 min on tape 9B

# ACOUSTIC DATA VIDEO TAPE LOG SHEET

SERIES: 7 TAPE: 6 C

Sony attn: 0 PCM level: -6 Tape speed: SLP 16 Bit

| SONY TAPE No. | START TIME(local) | END TIME(local) | VIDEO DATA START | COUNTS DATA END | NOTES |
|---|---|---|---|---|---|
| 12B | 17:00 | 17:31 | 0010 | 0881 | |
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## MULTIPLEXER SETTINGS

| CHANNEL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| TRANSDUCER No. | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |

# Appendix 5

## Analyses of vertical plankton tow contents

## Summary of Plankton Tows

| Test No. | Depth Range | Start Time, GMT | Finish Time, GMT | Tow Speed m/s | Acoustic Record |
|---|---|---|---|---|---|
| 1 | 115-0 | 16:45 | 16:55 | Hand | Series 2 tape |
| 2 | 75-0 | 17:33 | 17:39 | 1.0 | Series 2 tape |
| 3 | 15-0 | --- | 17:45 | 1.0 | Series 2 tape |
| 4 | 75-0 | 18:03 | 18:08 | 1.0 | Series 2 tape |
| 5 | 15-0 | 18:13 | 18:16 | 1.0 | Series 2 tape |
| 6 | 115-0 | 18:29 | 18:33 | 1.0 | Series 2 tape |
| 7 | 75-0 | 19:50 | 19:52 | 0.5 | Paper only |
| 8 | 35-0 | --- | 20:05 | 0.5 | Paper only |
| 9 | 75-0 | 20:15 | --- | 0.5 | Paper only |
| 10 | 15-0 | 20:22 | 20:26 | 0.5 | Paper only |
| 11 | 50-0 | 20:27 | --- | 1.5 | Paper only |

SAMPLE NO. 1

DEPTH RANGE m 115-0

TOW SPEED m/s By hand

ICE KEEL STATION

APRIL 29, 1985

Numbers/Total Sample

| | STAGE | | | | | |
|---|---|---|---|---|---|---|
| | II | III | IV | V | VI | TOTAL |
| COPEPODA | | | | | | |
| *Metridia longa* | -- | -- | 25 | 12 | 6 | 43 |
| *Calanus hyperboreus* | -- | 6 | 6 | 1 | -- | 13 |
| *Calanus glacialis* | 1 | 29 | 15 | -- | -- | 45 |
| *Pseudocalanus* sp. | | | | | | -- |
| *Euchaeta* sp. | | | | | | 3 |
| *Acartia* | | | | | | 1 |
| *Xanthocalanus* | | | | | | 1 |
| *Microcalanus* | | | | | | -- |
| *Oithona* | | | | | | -- |
| CNIDARIA | | | | | | |
| *Aglantha digitale* | | | | | | 3 |
| AMPHIPODA | | | | | | |
| *Parathemisto* sp. | | | | | | 1 |
| CTENOPHORA | | | | | | |
| Larvae | | | | | | -- |
| MOLLUSCA | | | | | | |
| *Limacina helicina* | | | | | | -- |
| *Clione limacina* | | | | | | -- |
| CHAETOGNATHA | | | | | | |
| *Sagitta elegans* | | | | | | 2 |
| UROCHORDATA | | | | | | |
| *Oikopleura labradoreinsis* | | | | | | 1 |
| FISH | | | | | | |
| Larvae | | | | | | -- |

SAMPLE NO. 2 | ICE KEEL STATION | APRIL 29, 1985

DEPTH RANGE m 75-0

TOW SPEED m/s 1.0

Numbers/Total Sample

| | STAGE II | III | IV | V | VI | TOTAL |
|---|---|---|---|---|---|---|
| COPEPODA | | | | | | |
| Metridia longa | -- | 5 | 13 | -- | -- | 18 |
| Calanus hyperboreus | -- | 4 | 9 | -- | -- | 13 |
| Calanus glacialis | 2 | 27 | 5 | -- | 1 | 35 |
| Pseudocalanus sp. | | | | | | 16 |
| Euchaeta sp. | | | | | | 3 |
| Acartia | | | | | | -- |
| Xanthocalanus | | | | | | 1 |
| Microcalanus | | | | | | 4 |
| Oithona | | | | | | 2 |
| CNIDARIA | | | | | | |
| Aglantha digitale | | | | | | 1 |
| AMPHIPODA | | | | | | |
| Parathemisto sp. | | | | | | 5 |
| CTENOPHORA | | | | | | |
| Larvae | | | | | | 2 |
| MOLLUSCA | | | | | | |
| Limacina helicina | | | | | | 6 |
| Clione limacina | | | | | | -- |
| CHAETOGNATHA | | | | | | |
| Sagitta elegans | | | | | | -- |
| UROCHORDATA | | | | | | |
| Oikopleura labradoreinsis | | | | | | 1 |
| FISH | | | | | | |
| Larvae | | | | | | -- |

SAMPLE NO. 3 ICE KEEL STATION APRIL 29, 1985
DEPTH RANGE m 15-0
TOW SPEED m/s 1.0

Numbers/Total Sample

| | STAGE | | | | | |
|---|---|---|---|---|---|---|
| | II | III | IV | V | VI | TOTAL |
| COPEPODA | | | | | | |
| Metridia longa | | | | | | -- |
| Calanus hyperboreus | -- | 2 | -- | -- | -- | 2 |
| Calanus glacialis | -- | 4 | -- | -- | -- | 4 |
| Pseudocalanus sp. | | | | | | 5 |
| Euchaeta sp. | | | | | | -- |
| Acartia | | | | | | -- |
| Xanthocalanus | | | | | | -- |
| Microcalanus | | | | | | -- |
| Oithona | | | | | | -- |
| CNIDARIA | | | | | | |
| Aglantha digitale | | | | | | -- |
| AMPHIPODA | | | | | | |
| Parathemisto sp. | | | | | | 3 |
| CTENOPHORA | | | | | | |
| Larvae | | | | | | -- |
| MOLLUSCA | | | | | | |
| Limacina helicina | | | | | | -- |
| Clione limacina | | | | | | -- |
| CHAETOGNATHA | | | | | | |
| Sagitta elegans | | | | | | -- |
| UROCHORDATA | | | | | | |
| Oikopleura labradoreinsis | | | | | | 1 |
| FISH | | | | | | |
| Larvae | | | | | | -- |

SAMPLE NO. 4
DEPTH RANGE m 75-0
TOW SPEED m/s 1.0

ICE KEEL STATION

APRIL 29, 1985

Numbers/Total Sample

| | STAGE | | | | | |
|---|---|---|---|---|---|---|
| | II | III | IV | V | VI | TOTAL |
| COPEPODA | | | | | | |
| *Metridia longa* | -- | 4 | 1 | -- | -- | 5 |
| *Calanus hyperboreus* | -- | 4 | 3 | -- | -- | 7 |
| *Calanus glacialis* | -- | 27 | 10 | -- | 2 | 39 |
| *Pseudocalanus* sp. | | | | | | 15 |
| *Euchaeta* sp. | | | | | | 2 |
| *Acartia* | | | | | | -- |
| *Xanthocalanus* | | | | | | -- |
| *Microcalanus* | | | | | | -- |
| *Oithona* | | | | | | -- |
| CNIDARIA | | | | | | |
| *Aglantha digitale* | | | | | | 1 |
| AMPHIPODA | | | | | | |
| *Parathemisto* sp. | | | | | | 5 |
| CTENOPHORA | | | | | | |
| Larvae | | | | | | -- |
| MOLLUSCA | | | | | | |
| *Limacina helicina* | | | | | | 4 |
| *Clione limacina* | | | | | | 1 |
| CHAETOGNATHA | | | | | | |
| *Sagitta elegans* | | | | | | -- |
| UROCHORDATA | | | | | | |
| *Oikopleura labradoreinsis* | | | | | | 3 |
| FISH | | | | | | |
| Larvae | | | | | | -- |

SAMPLE NO. 5 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 15-0

TOW SPEED m/s 1.0

Numbers/Total Sample

| | STAGE | | | | | |
|---|---|---|---|---|---|---|
| | II | III | IV | V | VI | TOTAL |
| COPEPODA | | | | | | |
| Metridia longa | 1 | -- | -- | -- | -- | 1 |
| Calanus hyperboreus | | | | | | -- |
| Calanus glacialis | -- | 1 | -- | -- | -- | 1 |
| Pseudocalanus sp. | | | | | | 2 |
| Euchaeta sp. | | | | | | -- |
| Acartia | | | | | | -- |
| Xanthocalanus | | | | | | -- |
| Microcalanus | | | | | | -- |
| Oithona | | | | | | -- |
| CNIDARIA | | | | | | |
| Aglantha digitale | | | | | | -- |
| AMPHIPODA | | | | | | |
| Parathemisto sp. | | | | | | -- |
| CTENOPHORA | | | | | | |
| Larvae | | | | | | -- |
| MOLLUSCA | | | | | | |
| Limacina helicina | | | | | | -- |
| Clione limacina | | | | | | -- |
| CHAETOGNATHA | | | | | | |
| Sagitta elegans | | | | | | -- |
| UROCHORDATA | | | | | | |
| Oikopleura labradoreinsis | | | | | | 1 |
| FISH | | | | | | |
| Larvae | | | | | | -- |

SAMPLE NO. 6 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 115-0

TOW SPEED m/s 1.0

Numbers/Total Sample

| | STAGE | | | | | |
|---|---|---|---|---|---|---|
| | II | III | IV | V | VI | TOTAL |
| COPEPODA | | | | | | |
| *Metridia longa* | -- | 6 | 23 | 11 | 7 | 47 |
| *Calanus hyperboreus* | 1 | 6 | 4 | -- | 2 | 13 |
| *Calanus glacialis* | 2 | 31 | 13 | -- | 3 | 49 |
| *Pseudocalanus* sp. | | | | | | 18 |
| *Euchaeta* sp. | | | | | | 1 |
| *Acartia* | | | | | | -- |
| *Xanthocalanus* | | | | | | -- |
| *Microcalanus* | | | | | | 1 |
| *Oithona* | | | | | | -- |
| CNIDARIA | | | | | | |
| *Aglantha digitale* | | | | | | 1 |
| AMPHIPODA | | | | | | |
| *Parathemisto* sp. | | | | | | 3 |
| CTENOPHORA | | | | | | |
| Larvae | | | | | | -- |
| MOLLUSCA | | | | | | |
| *Limacina helicina* | | | | | | 6 |
| *Clione limacina* | | | | | | -- |
| CHAETOGNATHA | | | | | | |
| *Sagitta elegans* | | | | | | 1 |
| UROCHORDATA | | | | | | |
| *Oikopleura labradoreinsis* | | | | | | 2 |
| FISH | | | | | | |
| Larvae | | | | | | -- |

SAMPLE NO. 7 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 75-0

TOW SPEED m/s 0.5

Numbers/Total Sample

| | STAGE | | | | | |
|---|---|---|---|---|---|---|
| | II | III | IV | V | VI | TOTAL |
| COPEPODA | | | | | | |
| *Metridia longa* | -- | 2 | 10 | 7 | 3 | 22 |
| *Calanus hyperboreus* | -- | 3 | 2 | -- | -- | 5 |
| *Calanus glacialis* | --- | 14 | 2 | -- | 1 | 17 |
| *Pseudocalanus* sp. | | | | | | -- |
| *Euchaeta* sp. | | | | | | -- |
| *Acartia* | | | | | | -- |
| *Xanthocalanus* | | | | | | -- |
| *Microcalanus* | | | | | | -- |
| *Oithona* | | | | | | -- |
| CNIDARIA | | | | | | |
| *Aglantha digitale* | | | | | | 1 |
| AMPHIPODA | | | | | | |
| *Parathemisto* sp. | | | | | | -- |
| CTENOPHORA | | | | | | |
| Larvae | | | | | | -- |
| MOLLUSCA | | | | | | |
| *Limacina helicina* | | | | | | 1 |
| *Clione limacina* | | | | | | -- |
| CHAETOGNATHA | | | | | | |
| *Sagitta elegans* | | | | | | -- |
| UROCHORDATA | | | | | | |
| *Oikopleura labradoreinsis* | | | | | | 1 |
| FISH | | | | | | |
| Larvae | | | | | | -- |

SAMPLE NO. 8 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 35-0

TOW SPEED m/s 0.5

Numbers/Total Sample

| | STAGE | | | | | |
|---|---|---|---|---|---|---|
| | II | III | IV | V | VI | TOTAL |
| COPEPODA | | | | | | |
| Metridia longa | -- | -- | 6 | 1 | -- | 7 |
| Calanus hyperboreus | | | | | | -- |
| Calanus glacialis | 1 | 6 | 2 | -- | -- | 9 |
| Pseudocalanus sp. | | | | | | 8 |
| Euchaeta sp. | | | | | | 1 |
| Acartia | | | | | | -- |
| Xanthocalanus | | | | | | -- |
| Microcalanus | | | | | | -- |
| Oithona | | | | | | -- |
| CNIDARIA | | | | | | |
| Aglantha digitale | | | | | | -- |
| AMPHIPODA | | | | | | |
| Parathemisto sp. | | | | | | -- |
| CTENOPHORA | | | | | | |
| Larvae | | | | | | -- |
| MOLLUSCA | | | | | | |
| Limacina helicina | | | | | | -- |
| Clione limacina | | | | | | -- |
| CHAETOGNATHA | | | | | | |
| Sagitta elegans | | | | | | -- |
| UROCHORDATA | | | | | | |
| Oikopleura labradoreinsis | | | | | | 3 |
| FISH | | | | | | |
| Larvae | | | | | | -- |

SAMPLE NO. 9 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 75-0

TOW SPEED m/s 0.5

Numbers/Total Sample

| | STAGE | | | | | |
|---|---|---|---|---|---|---|
| | II | III | IV | V | VI | TOTAL |
| COPEPODA | | | | | | |
| Metridia longa | -- | 1 | 12 | 4 | 3 | 20 |
| Calanus hyperboreus | -- | 7 | 1 | 1 | -- | 9 |
| Calanus glacialis | -- | 23 | 7 | -- | 2 | 32 |
| Pseudocalanus sp. | | | | | | 11 |
| Euchaeta sp. | | | | | | 3 |
| Acartia | | | | | | -- |
| Xanthocalanus | | | | | | -- |
| Microcalanus | | | | | | 2 |
| Oithona | | | | | | -- |
| CNIDARIA | | | | | | |
| Aglantha digitale | | | | | | -- |
| AMPHIPODA | | | | | | |
| Parathemisto sp. | | | | | | -- |
| CTENOPHORA | | | | | | |
| Larvae | | | | | | -- |
| MOLLUSCA | | | | | | |
| Limacina helicina | | | | | | 1 |
| Clione limacina | | | | | | -- |
| CHAETOGNATHA | | | | | | |
| Sagitta elegans | | | | | | -- |
| UROCHORDATA | | | | | | |
| Oikopleura labradoreinsis | | | | | | -- |
| FISH | | | | | | |
| Larvae | | | | | | -- |

| | | | | | |
|---|---|---|---|---|---|
| SAMPLE NO. | 10 | ICE KEEL STATION | | APRIL 29, 1985 | |
| DEPTH RANGE m | 15-0 | | | | |
| TOW SPEED m/s | 0.5 | Numbers/Total Sample | | | |

| | STAGE | | | | | |
|---|---|---|---|---|---|---|
| | II | III | IV | V | VI | TOTAL |
| COPEPODA | | | | | | |
| Metridia longa | -- | -- | 4 | -- | 1 | 5 |
| Calanus hyperboreus | | | | | | -- |
| Calanus glacialis | -- | 2 | -- | -- | -- | 2 |
| Pseudocalanus sp. | | | | | | 2 |
| Euchaeta sp. | | | | | | -- |
| Acartia | | | | | | -- |
| Xanthocalanus | | | | | | -- |
| Microcalanus | | | | | | -- |
| Oithona | | | | | | -- |
| CNIDARIA | | | | | | |
| Aglantha digitale | | | | | | -- |
| AMPHIPODA | | | | | | |
| Parathemisto sp. | | | | | | 1 |
| CTENOPHORA | | | | | | |
| Larvae | | | | | | -- |
| MOLLUSCA | | | | | | |
| Limacina helicina | | | | | | 1 |
| Clione limacina | | | | | | -- |
| CHAETOGNATHA | | | | | | |
| Sagitta elegans | | | | | | -- |
| UROCHORDATA | | | | | | |
| Oikopleura labradoreinsis | | | | | | -- |
| FISH | | | | | | |
| Larvae | | | | | | 1 |

SAMPLE NO. 11 ICE KEEL STATION APRIL 29, 1985

DEPTH RANGE m 50-0

TOW SPEED m/s 1.5

Numbers/Total Sample

| | STAGE | | | | | |
|---|---|---|---|---|---|---|
| | II | III | IV | V | VI | TOTAL |
| COPEPODA | | | | | | |
| *Metridia longa* | --- | --- | 2 | --- | --- | 2 |
| *Calanus hyperboreus* | --- | 3 | --- | --- | --- | 3 |
| *Calanus glacialis* | 1 | 16 | 1 | --- | --- | 18 |
| *Pseudocalanus* sp. | | | | | | --- |
| *Euchaeta* sp. | | | | | | --- |
| *Acartia* | | | | | | --- |
| *Xanthocalanus* | | | | | | --- |
| *Microcalanus* | | | | | | --- |
| *Oithona* | | | | | | --- |
| CNIDARIA | | | | | | |
| *Aglantha digitale* | | | | | | --- |
| AMPHIPODA | | | | | | |
| *Parathemisto* sp. | | | | | | --- |
| CTENOPHORA | | | | | | |
| Larvae | | | | | | 1 |
| MOLLUSCA | | | | | | |
| *Limacina helicina* | | | | | | 2 |
| *Clione limacina* | | | | | | --- |
| CHAETOGNATHA | | | | | | |
| *Sagitta elegans* | | | | | | --- |
| UROCHORDATA | | | | | | |
| *Oikopleura labradoreinsis* | | | | | | --- |
| FISH | | | | | | |
| Larvae | | | | | | --- |